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1978 Needs Survey

Cost Estimates for Construction of Publicly-Owned Wastewater Treatment Facilities

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This is the fourth Needs Survey conducted since the enactment of Public Law 92-500. Three previous Surveys were conducted in 1973, 1974 and 1976. The 1978 Survey had four goals aimed at improvement of the Needs estimation process:

1. To secure estimates which are comparable nationwide.
2. To improve the overall quality of the estimates.
3. To develop a detailed information base to assist in program planning and management
4. To produce a national inventory of wastewater treatment facilities and combined sewer areas.

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1978 NEEDS SURVEY

COST ESTIMATES FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES

FEBRUARY 10, 1979

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COST ESTIMATES FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES

The 1978 Needs Survey

I. INTRODUCTION

This report is submitted in compliance with the provisions of the Clean Water Act, Sections 205(a) and 516(b)(1). Included in this report are a detailed estimate of the cost of construction of all needed publicly-owned treatment works in all of the States and the cost of construction of all needed publicly-owned treatment works in each of the States, to meet the 1983 goals of the Act. The cost estimates presented in this Survey may serve as a basis for Congressional allotment of funds in accordance with the provisions of the Act.

This is the fourth Needs Survey conducted since the enactment of P.L. 92-500. Three previous Surveys were conducted in 1973, 1974, and 1976. The 1978 Survey had four goals aimed at improvement of the Needs estimation process:

1. To secure estimates which are comparable nationwide,
2. To improve the overall quality of the estimates,
3. To develop a detailed information base to assist in program planning and management, and
4. To produce a national inventory of wastewater treatment facilities and combined sewer areas.

EPA, in a joint effort with an advisory group consisting of State and Regional representatives, formulated the approach used in the 1978 Needs Survey. The approach selected called for an active role by EPA, with State participation in varying degrees, State-by-State, depending on resource priorities. This permitted the use of a single nationwide methodology, with uniformly applied guidelines. Provision was made in the guidelines for local cost variations due to local conditions affecting construction costs.

II. EXPLANATION OF THE SURVEY

A. Cost Categories

The 1978 Survey used the same cost estimate Categories as were used in 1976. These Categories are:

Category I - SECONDARY TREATMENT. This included costs for facilities which are only required to provide "secondary treatment" or "best practicable wastewater treatment technology" (BPWTT). For the purpose of the Survey, BPWTT and secondary treatment were considered synonymous. Costs for systems designed to serve individual residences are reported in this Category.

Category II - HIGHER THAN SECONDARY TREATMENT. Costs reported in this Category are for treatment facilities that must achieve treatment levels more stringent than secondary. This requirement generally exists where water quality standards require removal of such pollutants as phosphorus, ammonia, nitrates, or organic and other substances. Included in Category II are the costs necessary to raise the treatment level of Category II facilities to secondary levels, e.g. if the existing treatment level of a facility is primary, then costs necessary to raise the treatment level to secondary are reported in Category II, together with the costs for treatment levels greater than secondary.

Category IIIA - CORRECTION OF INFILTRATION/INFLOW. Included are costs for correction of sewer system infiltration/inflow problems. Costs could also be reported for a preliminary sewer system analysis and for a detailed Sewer System Evaluation Survey.

Category IIIB - MAJOR REHABILITATION OF SEWERS. Requirements for replacement and/or major rehabilitation of existing sewer systems were reported in this Category. Costs were reported if the corrective actions were necessary to the total integrity of the system. Major rehabilitation is considered to be extensive repair of existing sewers beyond the scope of normal maintenance programs, where sewers are collapsing or structurally unsound.

Category IVA - NEW COLLECTOR SEWERS. This Category included costs of construction of new collector sewer systems and appurtenances designed to correct violations caused by raw discharges, seepage to waters from septic tanks and the like, and/or to comply with Federal, State or local actions.

Category IVB - NEW INTERCEPTOR SEWERS. Included in this Category were new interceptor sewers and transmission pumping stations necessary for the bulk transport of wastewaters.

Category V - CONTROL OF COMBINED SEWER OVERFLOW. Costs reported for this Category were for facilities to prevent and/or control periodic bypassing of untreated wastes from combined sewers to achieve water quality objectives and which are eligible for Federal funding. It does not include treatment and/or control of stormwaters in separate storm and drainage systems.

Category VI - TREATMENT AND/OR CONTROL OF STORMWATERS. This Category included the costs of abating pollution in urbanized areas from stormwater runoff channelled through sewers and other conveyances used only for such runoff. The cost of abating pollution from stormwater channelled through combined sewers which also carry sewage are included in Category V.

The incremental cost for removal of pollutants such as toxic substances are not included in the Needs Survey.

Appendix A explains the details of the conduct of the Survey.

B. Survey Dollars

All costs were estimated in January, 1978 dollars.

C. Populations

Two time periods are of interest to the Needs Survey for population purposes. The first of these is the present, defined as the July, 1977 population of the States as calculated by the Bureau of the Census in publication P-25 (No.727). The second population of interest is the future or projected population, based on Bureau of Economic Analysis (BEA) projections for the year 2000. The BEA population projections are used consistently in the Construction Grants program.

Population estimates and projections are used as State population ceilings for Needs Survey purposes in Categories I-IV. These ceilings are not applicable to Categories V and VI.

III. RESULTS OF THE SURVEY

A. EPA Assessment

The EPA assessment of the dollar need for construction of municipal wastewater treatment facilities to serve year 2000 populations is $106.2 billion in Categories I through V, and an additional $62 billion for control of stormwater (Category VI). The States' estimate for the same needs are $109.1 billion for Categories I-V and $62 billion for Category VI (treatment and/or control of stormwaters).

Table A contains a summary of national needs by Category. Appendix C contains tables detailing the Survey results.

Included in the Needs assessment is $54.1 billion for Categories I, II and IVB (treatment plants and interceptors) that reflect the costs for the traditional Water Quality Program of Treatment Plants and Interceptor Sewers.

B. Independent State Estimates

After EPA formulation of cost estimates, States were asked to review these estimates and concur or provide additional data to support differing costs. In many cases, these data were supplied, and the resultant EPA assessments reflect those changes.

In some instances, however, differences in cost estimates were irreconcilable between EPA and State participants. In this case, State participants provided an independent State estimate of need differing from the EPA estimate, and usually higher in cost.

The reason for differing cost estimates was, in general, not associated with construction costs themselves, but with States' beliefs that Survey guidelines should be amended and/or adjusted in these areas to permit higher costs to be reported.

C. Differences Between State and EPA Estimates

A total of over 155,000 possible individual cost estimates were investigated by EPA. Over 55,000 of these possible estimates resulted in a need. Table 42 shows for each State the number of individual cost estimates made by EPA in Categories I-IV (treatment plants and sewers), which resulted in a need. For Categories V and VI (control of combined sewer overflow and stormwater), two estimates per State were made for the capital costs of achieving the 1985 goals of the Act. One estimate was for current (1977) populations, and the other for 2000 populations.

TABLE A - 1978 Needs Survey Summary Costs
(January, 1978 Dollars in Billions)

Needs Category	EPA Assessment	State Estimate	Difference	Percent Difference
I (Plants Which Require Only Secondary Treatment)	15.09	15.17	.08	.005
II (Plants Which Require More Stringent Treatment Than Secondary*)				
A. To Achieve Secondary Levels	(11.0)			
B. Advanced Secondary Levels	(6.8)			
C. Advanced Treatment Levels	(2.7)			
Total Category II	20.51	21.78	1.27	6
IIIA (Infiltration/Inflow)	2.44	2.56	.12	5
IIIB (Replacement and/or Rehabilitation)	4.88	4.94	.06	1
IVA (New Collector Sewers)	19.02	19.19	.18	1
IVB (New Interceptor Sewers)	18.47	18.68	.21	1
V (Combined Sewer Overflows)	25.74	26.76	1.02	4
Total I, II, IVB	54.07	55.63	1.56	3
Total I - V	106.15	109.08	2.93	3
VI (Control of Stormwater)	61.67	61.70	0	0
Total I - VI	167.82	170.78	2.96	2

* Split of Category II Needs provided by EPA only. No State participation included.

Of over 155,000 separate potential cost estimates investigated by EPA, only 2953 (2 percent) independent estimates were submitted by States, representing 3 percent of the Needs. Table 43 shows for each State the number of independent estimates submitted in Categories I-IV, by Category of Need. The bulk of these independent estimates are:

State	Percent of Number of State Estimates	Percent of EPA Dollar Assessment
Wisconsin	2.6	18.1
Maryland	2.5	5.5
Michigan	2.0	3.4
Nevada	3.2	8.5
New York	32.2	7.0
Washington	.002	3.2

A total of forty States and Territories reported no independent State estimates differing from EPA estimates. For Categories V & VI, independent State estimates were submitted only for California and Vermont. A description of the reasons for independent State estimates is given in Appendix B.

Of approximately 155,000 possible estimates, 1,267 separate estimates representing 758 Survey forms were submitted by States. Most of these estimates were based on State-developed cost curves or State population projections exceeding allowable ceilings. Other reasons for separate estimates include disagreement on allocation of dollars between Categories I-IV versus Category V, inclusion of ineligible facilities, and differing inflation factors.

D. Assessment of Backlog

A continued appendage to the Survey was the assessment of need for present populations (the backlog of need). Needs for Categories I-V present populations are estimated to be $79 billion, or 74 percent of the year 2000 needs. Note that because of their nature, year 2000 Needs for Categories IIIA (infiltration/inflow correction) and IIIB (major sewer rehabilitation) are almost exclusively all backlog needs. In addition, for reasons detailed in Section 211 of P.L. 95-217 and the Construction Grant Regulations (40 CFR 35.925-13), all of the Category IVA (collector sewers) needs for year 2000 are theoretically also backlog needs (see Section V for a discussion of the extent to which Category IVA in practice includes provision for future population growth). The differences, therefore, are most graphically illustrated in Categories I, II, and IVB (treatment plants and interceptor sewers), where backlog needs represent only 45 percent of the year 2000 needs. Backlog and 2000 needs are presented by Category in the following table:

Needs Category	Year 2000 EPA Assessment	Backlog Estimate	Percent Difference
I (Secondary Treatment)	15.09	9.66	36
II (More Stringent Treatment)			
A. Secondary Levels	(11.0)		
B. Advanced Secondary	(6.8)		
C. Advanced Treatment	(2.7)		
Total Category II	20.51	10.63	48
IIIA (Infiltration/Inflow)	2.44	2.44	0
IIIB (Replacement and/or Rehab.)	4.88	4.87	0
IVA (New Collector Sewers)	19.02	19.02	0
IVB (New Interceptor Sewers)	18.47	6.69	64
V (Combined Sewer Overflow)	25.74	25.74	0
Total I, II, IVB	54.07	26.98	50
Total I-V	106.15	79.05	26
VI (Control of Stormwater)	61.67	45.70	26
Total I-VI	167.82	124.75	26

The differences between backlog and year 2000 needs are substantial both because of the increase in population projected from the present (220 million persons) to the year 2000 (270 million persons) and to the increase in percent of population projected to be served by municipal systems (from 69 percent at present to 88 percent in year 2000).

The differences between backlog and future estimates has grown between 1976 and 1978, for two major reasons. First, the target date for future needs was changed from year 1990 to year 2000, a change made to bring needs estimates more in line with existing planning efforts in the wastewater field. This change added an estimated $4.3 billion to future needs as a result of the addition of 11 million people. Second, the effect of grant awards seems to be greater on backlog needs than on future needs. Backlog needs were reduced by more than 25 percent from 1976 to 1978, while future needs were reduced by about 10 percent.

The costs reported for the backlog are sufficient only for facilities necessary to serve the June, 1977 populations. They do not include any costs for reserve capacity which would be required by the Act to be included in these facilities for population growth beyond 1977. They also exclude estimates for treatment plants and sewers that were not necessary at all in 1977, but are projected to be necessary for year 2000 populations. Backlog needs, as determined by EPA, are shown in Table 36.

E. Costs of Plants Requiring Treatment More Stringent than Secondary (Category II)

Category II cost estimates include all costs for each treatment facility where required treatment levels are higher than secondary, including costs to bring treatment levels to secondary. Using cost curves derived from recently completed treatment construction projects, EPA estimated those portions of Category II needs required for three levels of construction:

1. to upgrade Category II facilities to secondary treatment levels - $11.0 billion.

2. to upgrade Category II facilities from secondary levels to advanced secondary levels. Advanced secondary levels are achieved in general when effluent limits for BOD are between 30 and 10 mg/l. (85-95 percent removal) and no nitrogen removal requirements exist. These costs are estimated at $6.8 billion, or 19 percent of total treatment needs, and 26 percent of treatment projects.

3. to raise Category II facilities from advanced secondary levels to advanced treatment levels (AWT). Advanced treatment is defined as removal of BOD above 95 percent (less than 10 mg/l) or nitrogen removal requirements. The estimate for AWT costs is $2.7 billion, which represents 8 percent of total treatment needs, and 5 percent of treatment projects.

Table B shows the distribution of treatment costs among the various sub-categories of treatment level.

F. Urban/Non-Urban Needs

Needs in Standard Metropolitan Statistical Areas (SMSA's) were estimated, as well as needs outside of SMSAs. While the areas outside of SMSAs may include communities of up to 50,000 population, this division provides some idea of the relative division between urban and non-urban needs. Table C shows the split of year 2000 needs into SMSA/non-SMSA categories. This table shows that the per capita needs in the Nation's metropolitan areas remain above the national average, while needs outside of metropolitan areas are below that average. The table also shows that almost all sewer rehabilitation needs are found in metropolitan areas, while collector sewer costs tend to be higher in rural areas, where distances are greater.

TABLE B - TREATMENT COSTS BY TREATMENT LEVEL
(BILLIONS OF JANUARY 1978 DOLLARS)

NEEDS CATEGORY	TOTAL NEEDS	NEED TO ACHIEVE SECONDARY TREATMENT LEVELS	ADVANCED SECONDARY TREATMENT LEVELS	ADVANCED WASTE TREATMENT LEVELS
Category I - (Secondary Treatment)	15.1	15.1	--	--
Category II - Treatment More Stringent than Secondary)	20.5	11.0	6.8	2.7
TOTAL	35.6	26.1 (73 percent)	6.8 (19 percent)	2.7 (8 percent)
Number of Projects	17,258	11,863 (69 percent)	4,467 (26 percent)	928 (5 percent)

TABLE C - 1978 NEEDS SURVEY

PER CAPITA SMSA/NON-SMSA NEEDS

(DOLLARS PER CAPITA)

CATEGORIES	WITHIN SMSA'S	OUTSIDE SMSA'S	NATIONAL AVERAGE
Category I	67	73	68
Category II	100	72	93
Category IIIA	10	11	11
Category IIIB	30	2	22
Category IVA	84	94	86
Category IVB	89	69	83
Category V	122	137	127
Total I, II, IVB	256	214	245
Total I-V	502	458	490

G. Needs for Large Financially Troubled Urban Core Areas

Major U. S. metropolitan areas have large needs. A few areas have needs above $1 billion. The New York metropolitan area is the city with by far the greatest need, estimated at $7 billion in Categories I-V. The major components of that need are shown below.

Needs Category	Amount for N.Y. Metro Area (millions of dollars)	Amount for New York City
Category I	2,086	1,887
Category II	753	0
Category IIIA	12	0.4
Category IIIB	2,754	2,754
Category IVA	1,405	484
Category IVB	1,285	326
Category V	2,519	1,742
Total	10,814	7,193

While needs in the metro area have decreased since the 1976 Survey by about 10 percent, needs in the city have remained almost constant at seven billion dollars. This situation is not unique to New York, but is a common occurrence in financially troubled cities, which have little prospect of financing the local share of more than a small percentage of their wastewater treatment and conveyance needs. The national total of needs in the ten most financially distressed large cities is about $15 billion. A hard core of need exists which is not likely to be met in the foreseeable future, in most of these cities.

IV. COMPARISON WITH THE 1976 SURVEY

A. Treatment Plants and Sewers (Categories I-IV)

The estimates of needs for the 1978 Survey in Categories I-IV built on the experience and information from previous Needs Surveys. EPA, in consultation with a working group of State representatives, determined that the Survey would be conducted for Categories I-IV on a facility-by-facility basis as in 1976. A consultant firm, Dames & Moore, was again competitively selected to augment the manpower available within EPA and the States. Survey guidance was prepared in conjunction with the States and discussed in detail during meetings held with the States at EPA's regional offices. All data from the 1976 Survey were pre-printed on the Survey reporting form as a starting point for the 1978 effort.

Dames & Moore established its personnel in EPA's ten regional offices in the Spring of 1978 and prepared estimates facility-by-facility on the basis of information in regional and State files. States were asked to review and comment on estimates and provide assistance, subject to the constraint that adverse impact on the progress of the Construction Grants Program should be avoided as much as possible. Independent State estimates were recorded when agreement between the State and EPA was not possible.

The completed estimates were approved by the State and EPA and sent to Washington for a rigorous quality check and entry into a computer file.

Table D shows the 1978 Survey results compared with the 1976 Survey. The results of the 1978 Survey track well with the 1976 results, given the volume of grants awarded and the inflation of construction costs experienced between Surveys. The net result was a decrease in needs of three percent for Categories I-V. The major reasons for the differences in these estimates for Categories I-IV are summarized below:

Reasons which decreased needs:

1. Categories I, II, and IVB (Treatment Plants and Interceptors) were substantially affected by the $14 billion of construction grant funds obligated between the 1976 and 1978 Surveys. The $14 billion included $10.5 billion in federal funds and $3.5 billion in local funds.

2. Needs in Category II (Treatment more Stringent than Secondary) went down, causing a reduction in total treatment needs, even though secondary treatment needs went up slightly. This change was primarily caused by better reporting procedures and better cost information on Category II facilities, and not a reduction of the number of facilities with needs for treatment levels higher than secondary.

3. The estimates for Categories IIIA and IIIB (Infiltration/Inflow Correction and Major Sewer Rehabilitation) have been substantially reduced from the 1976 Survey, while the reporting rules for these costs remained identical during the two surveys. The changes were caused by more careful reporting of Category III needs, the shift of some needs previously reported in Category III to Category V, and the award of grants during the period between Needs Surveys.

4. Category IVB needs (Interceptor Sewers) have been reduced by 9 percent primarily due to grant awards made in 1976 and 1977.

Table D - Comparison of 1978 Survey with 1976 Survey
(January, 1978 Dollars in Billions)

Needs Category	1978 Survey	1976 Needs	$Diff	%Diff
I (Secondary Treatment)	15.09	14.72	+.37	+3
II (More Stringent Treatment)				
A. Secondary levels	(11.0)			
B. Advanced Secondary	(6.8)			
C. Advanced Treatment	(2.7)			
Total Category II	20.51	24.17	-3.66	-15
IIIA (Infiltration/Inflow)	2.44	3.43	-.99	-29
IIIB (Replacement and/or Rehabilitation)	4.88	6.23	-1.35	-22
IVA (New Collector Sewers)	19.02	19.29	.27	-1
IVB (New Interceptor Sewers)	18.47	20.36	-1.89	-9
V (Combined Sewer Overflow)	25.74	20.75	+4.99	+24
Total I - V	106.15	108.95	-2.80	-3
VI (Control of Stormwater)	61.67	61.49	+.18	+0.3
Total I - VI	167.82	170.44	-2.62	-2

Reasons which increased needs:

1. All categories were substantially affected by general inflation, estimated for Needs purposes at 6.8 percent per year. Inflation effects are responsible for an estimated $13 billion rise in needs.

2. The completion of a national facilities inventory for the 1978 Survey resulted in the addition of over 13,000 facilities, almost all of which are very small facilities located in rural areas. This increase was experienced because the inventory of facilities was completed for the first time.

3. All needs were increased to some extent because the future needs reporting date was changed from year 1990 to year 2000. This change brought the Needs Survey more in line with existing planning efforts for wastewater facilities, and resulted in an estimated increase of $4.3 billion in future needs.

4. New and improved historical cost data were used to generate cost curves for use in the Survey which were substantially higher in cost than previous curves. The improvement in the quality of the curves, however, was significant as well.

B. Combined Sewer Overflow (Category V)

The 1978 Category V Needs are 24 percent higher than those estimated in the 1976 Needs Survey, after adjustment for construction cost increases since January 1, 1976. The primary reason for this is the increase in the volume and accuracy of information sources needed to make these estimates. The 320 urbanized areas surveyed were studied as 1143 separate combined sewer areas in the 1978 Needs Survey.

EPA completed an inventory of combined sewer areas in the 1978 Needs Survey. The reported combined sewer acreage increased by 13 percent as a result. The distribution of combined sewer overflow control needs shifted from 19 percent in non-urbanized areas in the 1976 Survey to 34 percent in 1978. This increase in reported non-urbanized combined sewer areas affects costs significantly because the average capital cost to control pollution from non-urbanized areas is $15,896 per acre compared to $9,221 per acre for urbanized areas

Further, more detailed site studies were used to determine the relationships between the costs to control pollution from combined sewer areas and the data collected for each combined sewer area. This more detailed consideration of the individual characteristics of each combined sewer area is the major reason for the individual State needs changes from the 1976 Survey.

C. Treatment and/or Control of Stormwater (Category VI)

The 1978 Category VI Needs are one-fourth of 1 percent higher than those estimated in the 1976 Needs Survey, after adjustment for construction cost increases since January 1, 1976.

Individual State needs differences are due to a more detailed consideration of the individual characteristics of each urbanized area when compared to the 1976 Needs Survey methodology.

V. QUALITY OF FACILITY ESTIMATES, CATEGORIES I-V

The reliability of the cost estimates is dependent upon many factors. Highly accurate cost data can only be obtained if treatment facilities have been planned and designed adequately to meet projected water quality requirements. Also, cost estimation is related to the ability to discern "historical" cost trends based upon actual treatment plant cost experience. Accordingly, EPA studied a large number of wastewater treatment plants employing a variety of treatment technologies. Using these data, EPA developed cost estimating procedures which were used in the cost estimation process when better quality data were not available.

Actual recent cost experience was studied in sewer construction and installation as well. EPA developed cost estimating procedures and rules of thumb for pipe costs when better data were not available.

Supplementary to EPA supplied treatment and pipe cost estimating procedures, differences in local construction costs were recognized by the provision of cost multipliers for each area of the United States. One multiplier was used when estimating treatment costs in each of fifty-one areas, and the second multiplier was used for sewers in each of thirty areas.

The cost estimates for Categories I, II and IVB (treatment plants and interceptors) are considered most accurate because of the many years of experience with these types of construction costs. Also, facilities in these Categories have been subjected to the most rigorous planning requirements.

The cost estimates for Categories IIIA, IIIB, and V (infiltration/inflow, rehabilitation and combined sewer overflow) are not considered to be as accurate as those for the other Categories, but the estimates are considered to have greatly improved.

Numerous infiltration/inflow studies and rules of thumb based on experience to date have resulted in a substantial improvement in the Category IIIA estimates. Estimating the repair cost of sewers which defy routine inspection creates a weakness in Category IIIB estimates. In addition, there are few instances nationwide where sewer replacement is anticipated prior to actual sewer collapse, a relatively common occurrence in older cities.

EPA accepted needs for infiltration/inflow correction and major sewer rehabilitation only when they could be documented by facility plans or engineering studies. Additional undocumented needs may exist in many areas. Costs of correction of infiltration/inflow, however, can be traded off against treatment costs. Major sewer rehabilitation may in many cases be considered an ongoing operation and maintenance problem as much as a capital need eligible for grants funds.

Category IVA (new collector sewers) cost estimates have improved since 1976. The quality of estimates in this Category degrades quickly as non-uniform assumptions concerning future populations are introduced. Therefore, Category IVA needs were limited to include provision for future populations of up to 1.5 times the 1972 population requiring new sewers, in accordance with the rule of thumb used in the Construction Grants Program. Even though this limitation provides much better and more comparable eligible requirements for new collector sewers, it implicitly provides new collector sewer capacity for a great deal of future growth in vacant lots and on the fringes of communities in existence in 1972. Careful and detailed analysis of local conditions, as required in the facility planning process, would likely reduce the collector sewers eligible for construction grants below what was reported in the 1978 Survey. For this reason, the estimates in Category IVA, are still considered high.

For Category V (control of combined sewer overflow), estimates are difficult to make due to the variations in the size, number and frequency of combined sewer overflows, the characteristics of the receiving waters, and many other factors. A substantial amount of study and research has been conducted on how much and what type of control of combined sewer overflow are required under varying conditions. In addition, the Agency constructed a complete inventory of combined sewer areas in the United States which provided more accurate data about each combined sewer area and its receiving waters. The results of this work were incorporated in the model used in estimating needs for Category V, and the reported

costs are considered more comparable and reliable than in 1976. Several major improvements were made to the model, including a continous rainfall simulation and the establishment of wet-weather water quality criteria, which traditionally have not been available. The shortcoming of this approach was that in many cases, important physical data about local conditions such as the number and location of overflow points and receiving water characteristics, were not available in national studies or data files, and therefore were estimated using a rule of thumb based on experience. The results, therefore, are not considered highly accurate for individual cities, although the State and national estimates are considered of good quality.

An important consideration for the entire discussion of the quality of cost estimates is the substantial upgrading of the quality of technical data supporting costs in this Survey, compared to prior Surveys. These data are significantly improved and are being published concurrently with this report. The reasons for this improvement are the work of the contractors, and the existence of many new planning documents not previously completed.

Based on the data collected in the 1978 inventory of combined sewer areas, facility plans have been completed for communities with 21 percent of the Nation's combined sewer acreage. Some fraction of these plans, however, may address only the dry weather component of the water pollution problem.

VI. QUALITY OF CATEGORY VI ESTIMATES

For Category VI (control of stormwater), the cost estimating methods are tentative at best. EPA estimates are based on a uniform methodology which incorporates the latest thinking in the field. The state of the art for control of stormwater is not nearly as advanced as that for dealing with combined sewer overflow. Although further research may indicate different approaches with substantially different costs are more appropriate than those utilized for the 1976 and 1978 Surveys, the 1976 and 1978 results are considered a much better approximation of stormwater pollution control costs than previous estimates.

VII. CONCLUSIONS

The 1978 Needs Survey is the best estimate available of the nationwide costs of compliance with the goals of the Clean Water Act of 1977. It is clear from the 1978 Needs Survey that in order to meet the water quality goals of the Act, a substantial amount of public monies will be required. For the second time in a Needs Survey, the effects of the public funds spent to date are noticeable in Categories I, II and IV.

VIII. FUTURE NEEDS SURVEYS

Because of the lead time required, planning for the 1980 Needs Survey is already in the formative stages. Our assessment is that the 1980 Needs Survey will require a smaller field effort than prior surveys, and will become a more continuous process than the condensed field estimation period required by prior Surveys.

APPENDIX A

CONDUCT OF THE SURVEY

I. CATEGORIES I-IV (Treatment Plants and Sewers)

A. Background

Drawing on the experience of prior Surveys, EPA and the States formed a working group to determine the strategy for the conduct of the 1978 Survey. Several Survey goals were identified by the group:

1. That the Survey identify and quantify all needs.

2. That the conduct of the Survey be nationally uniform.

3. That the utilization of scarce State personnel and dollar resources for the Survey be minimized.

4. That a complete inventory of municipal wastewater facilities be compiled.

The Survey approach taken for Categories I-IV (treatment plants and sewers) as a result of these recommendations was:

1. An independent consultant, paid by EPA, would conduct the Survey on a facility-by-facility basis for Categories I-IV. The consultant's personnel were to be based in EPA regional offices, but would visit State and local offices as required to formulate cost estimates. The engineering firm of Dames and Moore, with Headquarters in Los Angeles, California, and company resources sufficient for this large effort, was competitively selected.

2. Survey guidance and methodology were formulated for Categories I-IV in draft, and circulated to all parties involved in the Survey. State comments were solicited, and final guidance was issued which reflected those comments.

3. While national uniformity of estimating procedures was a Survey goal, the cost and construction differences inherent to various sections of the country were recognized and accommodated.

The formal Survey of Categories I-IV began with orientation meetings conducted in EPA regional offices where logistics, target dates, and individual State problems were discussed and resolved. States were asked only to provide as much investment in personnel for the Survey as they considered prudent; but were invited to participate fully in the formal Survey field work.

The Survey field work was conducted in the spring, summer, and fall of 1978. At the same time work on Categories V and VI was undertaken by a second consultant, Black, Crow, and Eidsness (now a part of CH2M Hill).

As estimates for Categories I-IV were completed, copies of the estimates were reviewed by States on a facility-by-facility basis. When cost agreement between EPA and State personnel could not be reached, separate estimates were submitted by States and have been included in this report.

Facility estimates were reviewed and accepted and/or approved at four levels: 1) contractor, 2) EPA Regional Office, 3) State, and 4) EPA Headquarters.

After machine preparation, data for Categories I-IV were summarized for this report.

B. Survey Methodology - Operational Guidance for Categories I-IV

Participant guidance for the Survey was formulated by EPA, the States, and the consultant working closely together. This document included the following subjects:

1. Responsibilities of the participants.

2. Target dates for project milestones including the calendar for the Survey and the consultant's contractual obligations.

3. Descriptions of all data sources to be provided to participants to aid in completion of the Survey.

4. Briefing schedules for the participants.

5. Provisions for State and Regional review of consultants data prior to finalization.

6. Definitions of terms for needs purposes. Standards were established for definitions of secondary treatment, design year, units of measurement, cost estimating, basis of cost estimate, design flows, and infiltration/inflow reporting.

7. Specific guidelines for completing Survey forms.

8. EPA adjustments to the 1976 Needs data base prior to its use as a starting point in 1978.

9. Cost estimating procedures to be used when more reliable local procedures were not available. These included estimating procedures for treatment costs and new sewers, with factors provided for determination of cost variation in any of fifty-one areas in the vicinity of major cities in the United States.

10. Interceptor sewer sizing tables.

As a result of meetings and other communications with all the States, the guidance was supplemented by request to include:

1. "Rules of Thumb" for estimating needs based on best engineering judgment. All of the participants understood that rules of thumb would be used only when better information was not available. Examples are:

   a. Per capita domestic and commercial flows were allowed consistent with the cost effective regulations.

   b. Collector and interceptor lengths were limited to sixteen feet and one foot per capita, respectively, of unsewered population.

2. A procedure for designating the basis of cost estimates.

3. Additional cost data, showing national capital costs for:

   a. chlorination facilities

   b. pumping stations

   c. filtration systems

   d. aerated lagoons and waste stabilization ponds

   e. phosphorus removal

4. Procedures for estimating backlog needs for all Categories.

5. Instructions for reconciliation of populations.

6. Guidance for estimation of collector sewer costs.

7. Information on grant eligibilities for land costs.

8. Guidance for estimation of I/I analysis costs.

9. Small and individual treatment systems.

C. Basis of Cost Estimate for Categories I-IV

All individual cost estimates made in Categories I-IV of the Survey were to be accompanied with a basis of cost estimate, so that the quality of the estimate can be better determined. EPA has determined that the quality of cost estimates can be ranked from high to low as follows:

1. Engineer/Consultant Firm Estimate

2. Engineer/Consultant Preliminary Estimate

3. Cost-Effectiveness Analysis

4. Cost of Previous Comparable Construction

5. EPA Supplied Cost Estimating Procedures

6. Rough Estimates

Table 44 shows the percent of State needs reported by basis of estimate. Table 45 shows the relative quality of estimates by Needs Survey Category. Note that three bases of estimate (State Certification, Analysis Completed, and Evaluation Survey Completed), refer to Category III (infiltration/inflow correction and major sewer rehabilitation) needs only, and have no application to other Categories.

These tables show that the quality of the cost estimates made in the 1978 Survey is substantially higher than in 1976, when 27 percent of needs used rough estimates or no basis of estimate.

D. Data Sources for Categories I-IV

1. The types of data needed in the Survey and the sources used to access these data were many. The major types of data used were:

   a. population (year 2000 and present)

   b. total flow (average, current design and projected year 2000 design)

   c. industrial flow (average, current design and projected year 2000 design)

   d. biological oxygen demand and suspended solids concentrations (average, current design and projected 2000 design)

   e. nitrogen and phosphorus removal requirements (average, current design and projected 2000 design)

   f. treatment methods

   g. sludge handling and treatment methods

   h. level of treatment required

2. The sources of these data were:

   a. 1976 Needs Survey data

   b. NPDES Applications and Permits

   c. Grant Application Files

   d. Grant Files and Grant Information Control System Data

   e. Regional and/or Basin Plans (201, 208 and 303 plans)

   f. Other Engineering Plans or Reports

   g. State Water Quality Standards.

E. Survey Preparation

The 1978 Survey form was generated by computer showing the 1976 Data of Record for each facility. Once the revised cost estimates were recorded on Survey forms for each facility, copies of the completed forms were provided for all parties participating in the Survey, primarily for State review and revision. The forms were then used to record the updated 1978 Needs Survey figures.

Census data for 1977 and BEA 2000 population projections were used as State ceilings. State population totals were not permitted to exceed these ceilings.

As Survey forms were completed, they were double checked by EPA for the accuracy of the data collected and submitted. Each State was then given the opportunity to review and comment upon the revised data shown on Survey forms, and to review the total cost estimates for the State.

Where differences over cost estimates were not resolved, States submitted independent cost estimates on the form. Few independent State estimates were required.

II. CATEGORIES V-VI (Control of Combined Sewer Overflow and Stormwater)

A. Background

Category V and VI estimates were derived from a computer cost model as in the 1976 Needs Survey with two significant improvements which were:

1. Substantial upgrading of the model to reflect the current state of the art.

2. Compilation of a complete inventory of combined sewer areas.

The consultant firm of Black, Crow and Eidsness was competitively hired to upgrade the model for Categories V & VI. Dames & Moore was given the task of compiling the inventory of combined sewer areas.

Information collected for the inventory included:

1. Location

2. Sewer system characteristics

3. Receiving water characteristics

4. Status of CSO correction planning

Sources of data for this information were:

1. State and local engineering reports
2. United States Geological Survey
3. National Combined Sewer System Data File

Data collection and model upgrading and analyses for Categories V & VI were conducted concurrently with the work for Categories I-IV.

In November, 1978, a draft of the results of the Category V & VI work was mailed to States with a request for review. Substantial changes were made to the model and the data base as a result of comments from the States.

B. Survey Methodology for Category V (Combined Sewer Overflow)

The methodology for estimating the cost to control combined sewer overflow to prevent periodic bypassing of untreated wastes from combined sewers was based on eight major factors. These factors were studied in fifteen cities in the United States selected because of their diverse wet weather conditions and the availability of good data. Data generated by the fifteen site studies were used to develop an estimate of the time water quality criteria would be violated. The estimate is based on a model which included all sources of pollution during dry and wet weather, and flow, quality, and reaeration capacity of the receiving water.

Similarly, data generated by the fifteen site studies were also used to determine the lowest cost combination of stormwater and combined sewer overflow control to meet receiving water criteria.

Further, from data generated by the fifteen site studies, an optimum mix of pollutant control technologies was developed for combined and separate or non-sewered areas for a range of required BOD and suspended solids removal efficiencies.

These relationships were applied to each of the 320 urbanized areas, or State portions of urbanized areas. These relationships were also applied to the combined sewer areas outside of urbanized areas utilizing State average data for some variables where necessary. In total, 1143 combined sewer areas were studied.

The eight major factors which affect Category V costs are as follows:

1. Pollutants to be Controlled.

The pollutants for which reasonable estimates of pollutant washoff and receiving water impact may be developed include: suspended solids, carbonaceous BOD, nitrogenous BOD, total phosphorus (for lakes), and fecal coliforms. For other materials such as pesticides or heavy metals not enough is known about their occurrence in the urban system to evaluate potential impacts.

2. Water Quality Criteria.

The water quality criteria applied to delineate the assimilative capacity of a receiving water are as follows:

a. Suspended solids.

The mean value of suspended solids concentration discharged to the receiving water from urban stormwater and combined sewer overflow sources should not exceed the mean value of the natural background suspended solids concentration for the subject receiving water on an annual basis. This criteria applies except in cases where the allowable mean value of suspended solids concentration is less than 25 mg/l. In this case a discharge limit of 25 mg/l shall apply.

b. Dissolved oxygen.

The minimum receiving water dissolved oxygen concentration shall not average less than 2.0 mg/l for more than 4 consecutive hours; nor shall the minimum receiving water dissolved oxygen concentration average less than 3.0 mg/l for more than 72 consecutive hours (3 days). In addition, the annual average receiving water dissolved oxygen concentration shall be greater than 5.0 mg/l for all waters which will support warm water species and shall be greater than 6.0 mg/l for all waters which will support cold water species.

c. Dissolved lead.

The mean in-stream 96 hour (time averaged) dissolved lead concentration should not exceed 0.330 mg/l. The long term mean in-stream dissolved lead concentration should not exceed 0.010 mg/l in soft waters (hardness less than 100 mg/l) or 0.025 mg/l in hard waters (hardness greater than 100 mg/l.)

d. Phosphorus.

Average annual lake phosphorus concentration should not exceed 0.025 mg/l.

e. Fecal coliforms

Two untreated overflow events per year shall not be exceeded

3. Cost of Alternative Technologies.

An optimum combination of control technologies is calculated for each combined sewer area. Streetsweeping and combined sewer flushing are employed at all treatment levels after calculation of the optimum level of efforts for these management practices. If these levels of removal are insufficient to satisfy the total required removal, the remainder must be removed by a storage/treatment system. The optimum treatment level, (see Tables A-1 and A-2) is a function of the removal required from the storage/treatment system, the pollutant type (BOD or suspended solids) and the sewer system type (separate or combined). After the optimum treatment level is selected, the optimum combination of storage volume and treatment rate is calculated.

4. Pollutant Sources from Dry Weather Flows.

The pollutant loadings from municipal dry weather sources are assumed to meet 1983 secondary treatment requirements. It is assumed that each population equivalent contributes the following:

a. BOD = 30 mg/l
   SS = 30 mg/l
   TKN = 28 mg/l
   Pb = 0.04 mg/l

b. 100 gallons per capita of wastewater per day

5. Pollutant Loads from Wet Weather Sources.

It was assumed that oxygen-demanding materials (i.e. BOD and TKN) will reach maximum accumulation in fifteen days and that non-oxygen demanding material (i.e. suspended solids and lead) accumulate in a linear fashion. Pollutant accumulation rates were calculated from the Stormwater Management Model Level 1 equations.

6. Tolerance of Aquatic Species

The receiving water quality criteria established for the Survey take into account the pollution tolerance of aquatic species. These tolerances were considered for both short-term and long-term exposure to pollutants.

For additional bacteriological cleanup in combined sewer overflow and urban runoff beyond that required for protection of fish and wildlife, the storage capacity and the treatment rate were increased so that the number of overflow events were limited to two per year, which is comparable to allowable violation standards for dry weather.

7. Pollutant Control Levels Required

Each combined sewer area has differing receiving water characteristics which affect pollution control costs substantially. The degree to which pollutant control is required is a function of the overall assimilative stream capacity resulting from the receiving water characteristics.

The factors which led to the determination of required control levels in each combined sewer area are the upstream flow and quality, the combined sewer overflow, urban storm runoff, the wastewater treatment plant effluent quality, and the receiving water flow.

8. Types and Costs of Alternatives Necessary to meet Receiving Water Criteria

Table A-1 below shows the nationwide distribution of combined sewer overflow treatment levels required to meet the recreational water quality criteria described, while taking into account both the annual and short-term assimilative capacity of the receiving waters. This table does not show the treatment levels required in combined sewer areas outside of urbanized areas.

C. Survey Methodology Category VI (Stormwater Control).

The methodology for estimating the cost to provide control and/or treatment of urban stormwater runoff channeled through sewers or other conveyances used only for such runoff is based on the same eight major factors and fifteen site studies as the Category V cost estimation methodology.

The cost estimates by State (and Territory) are based on regulations for the application of the NPDES Permit Program for separate storm sewers which were published in the Federal Register of March 18, 1976. In these regulations, the term "separate storm sewer" is defined as "a conveyance or system of conveyances . . . located in an urbanized area and primarily operated for the purpose of collecting and conveying stormwater runoff." In accordance with this guideline, the geographical areas which require control and/or treatment of stormwater runoff are urbanized areas of the Nation as defined by the U.S. Bureau of Census. The specific criteria for the delineation of an urbanized area is as follows:

1. A central city of 50,000 inhabitants or more, or twin cities with a combined population of at least 50,000, and with the smaller of the twin cities having a population of at least 15,000; and

2. Surrounding closely settled territory.

The eight major factors which affect Category VI cost estimates are the same as for Category V, except that sewer flushing was eliminated as an alternative technology.

Table A-2 below shows the nationwide distribution of combined sewer overflow treatment levels required to meet the dissolved water quality criteria described, while taking into account both the annual and short term assimilative capacity of the receiving waters.

TABLE A-1

TREATMENT LEVEL REQUIRED FOR RECREATION PROTECTION

IN COMBINED SEWER AREAS*

TREATMENT LEVEL	CAPITAL COST IN MILLIONS OF 1978 $	AREA IN ACRES	POPULATION
1 = STORAGE	-0-	-0-	-0-
2 = 1 + MICROSCREEN	514	68,191	620,184
3 = 2 + SEDIMENTATION - FLOCCULATION	6,738	817,148	9,302,403
4 = 3 + HIGH RATE FILTRATION	4,859	534,465	12,814,696
5 = 4 + DISSOLVED AIR FLOTATION	5,844	527,362	10,978,767
	17,955	1,947,166	33,716,050

*IN URBANIZED AREAS ONLY

TABLE A-2

TREATMENT LEVEL REQUIRED FOR RECREATION PROTECTION

IN STORM SEWERED AND NON-SEWERED AREAS* YEAR 2000*

TREATMENT LEVEL	CAPITAL COST IN MILLIONS OF 1978 $	AREA IN ACRES	POPULATION
1 = STORAGE	-0-	-0-	-0-
2 = 1 + MICROSCREEN	18,601	12,309,494	41,385,274
3 = 2 + SEDIMENTATION - FLOCCULATION	7,895	4,193,103	14,702,036
4 = 3 + HIGH RATE FILTRATION	35,174	15,741,459	74,340,124
5 = 4 + DISSOLVED AIR FLOTATION	-0-	-0-	-0-
	61,670	32,244,056	130,427,434

*IN URBANIZED AREAS ONLY

Appendix B

Reasons for Independent State Estimates
Categories I-VI

Prior to finalization of estimates, all Survey forms were sent to States for review and comment. States were encouraged to provide as much input as possible to secure the best available estimates. Where EPA and State estimates differed, an attempt was made to resolve the differences. To secure the most accurate and nationally consistent cost estimates, adherence to the Survey guidelines and rules of thumb as formulated by the EPA/State Needs Survey Working Group was enforced. Where agreement on specific estimates could not be reached between EPA and State personnel, separate estimates were submitted by States.

Of approximately 155,000 possible estimates, 1,267 separate estimates representing 758 Survey forms were submitted by States. Most of these estimates were based on State-developed cost curves or State population projections exceeding allowable ceilings. Other reasons for separate estimates include disagreement on allocation of dollars between Categories I-IV versus Category V, inclusion of ineligible facilities, and differing inflation factors.

The State of California submitted an independent estimate for Category V of $1,186,676,000 for control of pollution from combined sewer overflows. The EPA estimate, before adjustment for $125,000,000 of met needs, is $272,621,000. On a per acre of combined sewer area basis the State and EPA estimates respectively are 31,146 $/acre and 7,155 $/acre. For comparison purposes, the national average cost estimated by EPA to control pollution from combined sewer overflows is $10,752 per acre. The estimate presented by the State of California is approximately three times this national average cost. Most of this difference is due to the cost estimates for the city of San Francisco.

The differences between the EPA and State estimate for San Francisco result largely from different assumptions on appropriate control technology, in particular the optimal mix of storage and treatment capacity. EPA's estimate is derived from the model which is based on an intensive analysis of available research and other information on control technologies and the 15 site studies.

The model provides the advantage of producing needs estimates which are comparable among the States and based on reasonable and common assumptions. It is unlikely to provide the same answer in every city as would detailed facility planning. We understand, however, that San Francisco and the State of California have been considering revisions which would bring their current estimate of needs for San Francisco closer to the EPA estimate.

Given the objective of achieving comparable estimates among the States and the uncertainty of the State and local estimates for San Francisco, EPA has reported California's estimate as an independent State estimate but not as an EPA estimate.

The State of Vermont submitted an independent estimate for Category VI amounting to $30,824,000 for control of pollution from stormwater in fourteen communities. The EPA estimate is zero because the Needs Survey for Category VI covers only "census-defined urbanized areas," Vermont has no "census-defined urbanized areas." Regulations for the application of the NPDES Program to separate storm sewers were published in the Federal Register of March 18, 1976. This document and the permit program it established were utilized to determine the areas requiring needs in Category VI. The regulations defined the term separate storm sewer as a "a conveyance or system of conveyances ... located in an urbanized area and primarily operated for the purpose of collecting and conveying stormwater runoff."

The NPDES permit issuing authority may designate other storm sewers as being significant contributors of pollution and thus subject to these regulations. In absence of specific designation, stormwater needs are estimated for census-defined urbanized areas only.

However, this restriction is under active discussion in EPA, and may be subject to regulatory change allowing a more liberal interpretation of storm sewers in the future.

APPENDIX C

SUMMARY TABLES

Cost data from the 1978 Needs Survey are presented in summary tables included in this Appendix. The following tables show costs by State and U. S. totals:

Table 1 - EPA Assessments of Needs by Category.

Table 2 - Independent State Estimates of Needs by Category.

Table 3 - Comparison of 1978 and 1976 EPA Assessments, Categories I-V.

Table 4 - Comparison of 1978 and 1976 EPA Assessments for Treatment Plants, Categories I and II.

Table 5 - Comparison of 1978 and 1976 EPA Assessments for Categories I, II, and IVB.

Table 6 - Comparison of 1978 and 1976 EPA Assessments for Category I.

Table 7 - Comparison of 1978 and 1976 EPA Assessments for Category II.

Table 8 - Comparison of 1978 and 1976 EPA Assessments for Category IIIA.

Table 9 - Comparison of 1978 and 1976 EPA Assessments for Category IIIB.

Table 10 - Comparison of 1978 and 1976 EPA Assessments for Category IVA.

Table 11 - Comparison of 1978 and 1976 EPA Assessments for Category IVB.

Table 12 - Comparison of 1978 and 1976 EPA Assessments for Category V.

Table 13 - Comparison of 1978 and 1976 EPA Assessments for Category VI.

Table 14 - Per Capita Costs for year 2000 and Present Population, Categories I-V.

Table 15 - Per Capita Costs for year 2000 and Present Population, Categories I, II, and IVB.

Table 16 - Per Capita Costs for year 2000 and Present Population, Category I.

Table 17 - Per Capita Costs for year 2000 and Present Population, Category II.

Table 18 - Per Capita Costs for year 2000 and Present Population, Category IIIA.

Table 19 - Per Capita Costs for year 2000 and Present Population, Category IIIB.

Table 20 - Per Capita Costs for year 2000 and Present Population, Category IVA.

Table 21 - Per Capita Costs for year 2000 and Present Population, Category IVB.

Table 22 - Per Capita Costs for year 2000 and Present Population, Category V.

Table 23 - Comparison of 1978 and 1976 EPA Per Capita Assessments, Categories I-V.

Table 24 - Comparison of 1978 EPA Assessments with State Estimates for Categories I-V.

Table 25 - Comparison of Per Capita Differences Between the EPA and State Estimates, Categories I-V.

Table 26 - Comparison of 1978 EPA and State Estimates, Categories I and II.

Table 27 - Comparison of 1978 EPA and State Estimates, Categories I, II, and IVB.

Table 28 - Comparison of 1978 EPA and State Estimates, Category I

Table 29 - Comparison of 1978 EPA and State Estimates, Category II.

Table 30 - Comparison of 1978 EPA and State Estimates, Category IIIA.

Table 31 - Comparison of 1978 EPA and State Estimates, Category IIIB.

Table 32 - Comparison of 1978 EPA and State Estimates, Category IVA.

Table 33 - Comparison of 1978 EPA and State Estimates, Category IVB.

Table 34 - Comparison of 1978 EPA and State Estimates, Category V.

Table 35 - Comparison of 1978 EPA and State Estimates, Category VI.

Table 36 - Needs for Current Populations (Backlog), Categories I-VI.

Table 37 - Comparison of Year 2000 and Backlog Needs, Categories I-V.

Table 38 - Comparison of Year 2000 and Backlog Needs, Categories I and II.

Table 39 - Comparison of Year 2000 and Backlog Needs, Categories I, II, and IVB.

Table 40 - Per Capita Backlog of Needs, Categories I-V.

Table 41 - Per Capita Backlog of Needs, Categories I, II, and IVB.

Table 42 - Number of EPA Assessments by Category

Table 43 - Number of State Cost Estimates Differing from EPA Estimates

Table 44 - Percent of State Needs by Basis of Cost Estimate

Table 45 - Percent of National Needs by Basis of Cost Estimate

FEBRUARY 10, 1979
TABLE 1

1978 NEEDS SURVEY

EPA ASSESSMENTS FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1978 DOLLARS

CATEGORIES I THRU V

	TOTAL	I	II	III A	III B	IV A	IV B	V
ALABAMA	947	150	195	86	2	331	180	0
ALASKA	515	333	5	30	0	40	95	9
ARIZONA	512	182	9	1	0	118	199	0
ARKANSAS	531	65	171	29	2	134	99	0
CALIFORNIA	8,041	2,691	1,979	75	84	1,415	1,627	167
COLORADO	968	236	316	10	90	28	266	0
CONNECTICUT	1,383	207	139	31	18	405	182	398
DELAWARE	389	0	94	2	0	41	120	128
DIST. OF COLUM.	186	0	15	0	0	0	0	170
FLORIDA	4,976	468	1,405	70	0	1,560	1,462	8
GEORGIA	1,755	126	541	78	1	378	410	218
HAWAII	859	330	11	0	0	198	319	0
IDAHO	446	79	98	14	0	112	86	57
ILLINOIS	4,105	86	1,293	144	3	162	282	2,131
INDIANA	4,205	46	536	36	15	338	311	2,920
IOWA	1,096	181	316	80	0	123	201	192
KANSAS	1,103	294	123	48	16	121	289	209
KENTUCKY	2,085	84	373	74	0	575	385	592
LOUISIANA	1,136	405	57	45	12	320	294	0
MAINE	1,638	121	22	13	14	220	154	1,092
MARYLAND	2,910	20	843	7	1,347	221	323	147
MASSACHUSETTS	3,426	776	250	3	61	754	543	1,036
MICHIGAN	4,485	171	976	43	32	987	671	1,602
MINNESOTA	1,347	12	705	28	12	153	247	187
MISSISSIPPI	774	55	260	98	0	157	168	33
MISSOURI	2,535	779	23	59	7	228	678	757
MONTANA	125	37	6	2	1	23	20	33
NEBRASKA	317	159	2	1	0	32	50	70
NEVADA	260	65	121	1	0	38	33	0
NEW HAMPSHIRE	1,154	197	95	6	16	269	295	272
NEW JERSEY	4,196	924	866	137	1	655	601	1,009
NEW MEXICO	158	62	20	0	1	42	32	0
NEW YORK	14,156	2,393	1,291	103	2,762	2,436	1,863	3,305
NORTH CAROLINA	1,657	149	456	67	0	479	438	67
NORTH DAKOTA	82	48	0	0	1	3	14	13
OHIO	6,777	86	1,656	256	8	683	825	3,261
OKLAHOMA	572	33	212	36	20	139	129	0
OREGON	1,536	21	403	51	38	287	301	431
PENNSYLVANIA	5,358	506	1,132	10	0	982	529	2,198
RHODE ISLAND	945	144	96	10	2	260	100	329
SOUTH CAROLINA	840	158	63	51	0	314	251	0
SOUTH DAKOTA	207	43	99	3	1	5	29	24
TENNESSEE	1,757	168	387	124	0	512	365	198
TEXAS	3,110	4	1,214	214	67	566	1,002	39
UTAH	399	6	230	40	0	61	57	2
VERMONT	460	44	85	2	10	77	31	208
VIRGINIA	2,008	439	328	11	1	438	515	272
WASHINGTON	2,761	590	192	83	60	460	481	893
WEST VIRGINIA	1,845	271	113	1	0	514	189	754
WISCONSIN	1,797	103	636	76	143	269	301	268
WYOMING	75	49	3	7	0	1	9	3
AMERICAN SAMOA	57	22	0	0	1	9	23	0
GUAM	44	38	1	0	0	0	3	0
MARIANAS GROUP	56	17	0	0	0	17	21	0
PUERTO RICO	977	336	20	14	9	257	320	19
PAC. TR. TERR.	90	41	0	0	0	32	15	0
VIRGIN ISLANDS	44	16	0	0	0	11	16	0
U.S. TOTALS	106,153	15,090	20,507	2,437	4,877	19,022	18,474	25,742

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

FEBRUARY 10, 1979
TABLE 2

1978 NEEDS SURVEY

STATE ESTIMATES FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1978 DOLLARS

CATEGORIES I THRU V

	TOTAL	I	II	III A	III B	IV A	IV B	V
ALABAMA	947	150	195	86	2	331	180	0
ALASKA	515	333	5	30	0	40	95	9
ARIZONA	512	182	9	1	0	118	199	0
ARKANSAS	501	65	171	29	2	134	99	0
CALIFORNIA	9,060	2,691	1,979	75	84	1,415	1,627	1,186
COLORADO	948	236	316	10	90	28	266	0
CONNECTICUT	1,383	207	139	31	18	405	182	398
DELAWARE	390	0	94	2	0	41	121	128
DIST. OF COLUM.	186	0	15	0	0	0	0	170
FLORIDA	4,976	468	1,405	70	0	1,560	1,462	8
GEORGIA	1,755	126	541	78	1	378	410	218
HAWAII	859	330	11	0	0	198	319	0
IDAHO	446	79	98	14	0	112	84	57
ILLINOIS	4,224	86	1,411	144	3	162	283	2,131
INDIANA	4,205	46	536	36	15	338	311	2,920
IOWA	1,096	181	316	80	0	123	201	192
KANSAS	1,103	294	123	48	16	121	289	209
KENTUCKY	2,085	84	373	74	0	575	385	592
LOUISIANA	1,136	405	57	45	12	320	294	0
MAINE	1,638	121	22	13	14	220	154	1,092
MARYLAND	3,069	21	926	7	1,347	223	395	147
MASSACHUSETTS	3,426	776	250	3	61	754	543	1,036
MICHIGAN	4,639	173	1,043	69	81	993	676	1,602
MINNESOTA	1,351	16	705	28	12	153	247	187
MISSISSIPPI	774	55	260	98	0	157	168	33
MISSOURI	2,535	779	23	59	7	228	678	757
MONTANA	125	37	6	2	1	23	20	33
NEBRASKA	317	159	2	1	0	32	50	70
NEVADA	282	76	121	1	0	38	44	0
NEW HAMPSHIRE	1,154	197	95	6	16	269	295	272
NEW JERSEY	4,196	924	866	137	1	655	601	1,009
NEW MEXICO	158	62	20	0	1	42	32	0
NEW YORK	15,146	2,432	2,024	108	2,762	2,576	1,936	3,305
NORTH CAROLINA	1,657	149	456	67	0	479	438	67
NORTH DAKOTA	82	48	0	0	1	3	14	13
OHIO	6,777	86	1,656	256	8	683	825	3,261
OKLAHOMA	572	33	212	36	20	139	129	0
OREGON	1,536	21	403	51	38	287	301	431
PENNSYLVANIA	5,391	528	1,137	10	0	985	532	2,198
RHODE ISLAND	945	144	96	10	2	260	100	329
SOUTH CAROLINA	840	158	63	51	0	314	251	0
SOUTH DAKOTA	212	44	99	3	1	8	31	24
TENNESSEE	1,757	168	387	124	0	512	365	198
TEXAS	3,110	4	1,214	214	67	566	1,002	39
UTAH	399	6	230	40	0	61	57	2
VERMONT	461	44	86	2	10	77	31	208
VIRGINIA	2,008	439	328	11	1	438	515	272
WASHINGTON	2,848	590	192	170	60	460	481	893
WEST VIRGINIA	1,846	271	113	2	0	514	189	754
WISCONSIN	2,123	98	900	78	159	282	335	268
WYOMING	75	49	3	7	0	1	9	3
AMERICAN SAMOA	57	22	0	0	1	9	23	0
GUAM	44	38	1	0	0	0	3	0
MARIANAS GROUP	56	17	0	0	0	17	21	0
PUERTO RICO	987	339	20	14	9	257	326	19
PAC. TR. TERR.	90	41	0	0	0	32	15	0
VIRGIN ISLANDS	44	16	0	0	0	11	16	0
U.S. TOTALS	109,087	15,174	21,779	2,557	4,941	19,189	18,683	26,761

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

FEBRUARY 10, 1979
TABLE 3

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1978 DOLLARS
CATEGORIES I THROUGH V

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE
ALABAMA	983,473	947,377	-36,096	0.9027	0.8924	-0.0102
ALASKA	371,875	515,777	+143,902	0.3413	0.4858	+0.1445
ARIZONA	520,932	512,875	-8,057	0.4781	0.4831	+0.0049
ARKANSAS	588,251	501,930	-86,321	0.5399	0.4728	-0.0671
CALIFORNIA	6,298,173	8,041,449	+1,743,276	5.7810	7.5752	+1.7942
COLORADO	792,199	948,828	+156,629	0.7271	0.8938	+0.1666
CONNECTICUT	1,446,461	1,383,067	-63,394	1.3276	1.3028	-0.0248
DELAWARE	306,628	389,310	+82,682	0.2814	0.3667	+0.0852
DIST. OF COLUM.	257,928	186,077	-71,851	0.2367	0.1752	-0.0614
FLORIDA	4,233,437	4,976,527	+743,090	3.8858	4.6880	+0.8022
GEORGIA	1,857,904	1,755,995	-101,909	1.7053	1.6542	-0.0511
HAWAII	855,026	859,176	+4,150	0.7848	0.8093	+0.0245
IDAHO	496,504	446,643	-49,861	0.4557	0.4207	-0.0349
ILLINOIS	6,095,555	4,105,836	-1,989,719	5.5950	3.8678	-1.7272
INDIANA	3,594,601	4,205,646	+611,045	3.2994	3.9618	+0.6623
IOWA	1,176,748	1,096,588	-80,160	1.0801	1.0330	-0.0471
KANSAS	771,395	1,103,188	+331,793	0.7080	1.0392	+0.3311
KENTUCKY	1,457,536	2,085,385	+627,849	1.3378	1.9644	+0.6266
LOUISIANA	803,267	1,136,873	+333,606	0.7373	1.0709	+0.3336
MAINE	1,093,149	1,638,839	+545,690	1.0033	1.5438	+0.5404
MARYLAND	3,309,029	2,910,164	-398,865	3.0373	2.7414	-0.2958
MASSACHUSETTS	3,862,888	3,426,945	-435,943	3.5457	3.2282	-0.3174
MICHIGAN	5,831,375	4,485,332	-1,346,043	5.3525	4.2253	-1.1272
MINNESOTA	1,829,455	1,347,694	-481,761	1.6792	1.2695	-0.4096
MISSISSIPPI	852,366	774,969	-77,397	0.7823	0.7300	-0.0523
MISSOURI	2,942,420	2,535,324	-407,096	2.7008	2.3883	-0.3124
MONTANA	144,158	125,986	-18,172	0.1323	0.1186	-0.0136
NEBRASKA	465,497	317,681	-147,816	0.4272	0.2992	-0.1280
NEVADA	301,300	260,078	-41,222	0.2765	0.2450	-0.0315
NEW HAMPSHIRE	1,183,108	1,154,711	-28,397	1.0859	1.0877	+0.0018
NEW JERSEY	3,695,315	4,196,374	+501,059	3.3919	3.9531	+0.5612
NEW MEXICO	168,476	158,752	-9,724	0.1546	0.1495	-0.0050
NEW YORK	16,488,269	14,156,469	-2,331,800	15.1344	13.3358	-1.7986
NORTH CAROLINA	1,378,404	1,657,975	+279,571	1.2652	1.5618	+0.2966
NORTH DAKOTA	83,265	82,352	-913	0.0764	0.0775	+0.0011
OHIO	8,170,306	6,777,949	-1,392,357	7.4994	6.3850	-1.1144
OKLAHOMA	587,124	572,101	-15,023	0.5389	0.5389	+0.0000
OREGON	1,570,773	1,536,102	-34,671	1.4418	1.4470	+0.0052
PENNSYLVANIA	4,324,092	5,358,454	+1,034,362	3.9690	5.0478	+1.0787
RHODE ISLAND	621,190	945,772	+124,582	0.7537	0.8909	+0.1371
SOUTH CAROLINA	1,087,405	840,375	-247,030	0.9981	0.7916	-0.2064
SOUTH DAKOTA	156,371	207,041	+50,670	0.1435	0.1950	+0.0515
TENNESSEE	1,453,449	1,757,853	+304,404	1.3341	1.6559	+0.3218
TEXAS	3,197,223	3,110,742	-86,481	2.9347	2.9304	-0.0042
UTAH	307,145	399,396	+92,251	0.2819	0.3762	+0.0943
VERMONT	441,731	460,989	+19,258	0.4054	0.4342	+0.0288
VIRGINIA	1,798,570	2,008,651	+210,081	1.6508	1.8922	+0.2413
WASHINGTON	2,271,194	2,761,303	+490,109	2.0847	2.6012	+0.5165
WEST VIRGINIA	2,481,475	1,845,897	-635,578	2.2777	1.7388	-0.5388
WISCONSIN	2,245,665	1,797,595	-448,070	2.0612	1.6933	-0.3678
WYOMING	76,494	75,094	-1,400	0.0702	0.0707	+0.0005
AMERICAN SAMOA	68,090	57,318	-10,772	0.0624	0.0539	-0.0085
GUAM	81,338	44,858	-36,480	0.0746	0.0422	-0.0324
MARIANAS GROUP	0	56,322	+56,322	0.0000	0.0530	+0.0530
PUERTO RICO	1,046,376	977,206	-69,170	0.9604	0.9205	-0.0399
PAC. TR. TERR.	170,644	90,287	-80,357	0.1566	0.0850	-0.0715
VIRGIN ISLANDS	52,032	44,120	-7,912	0.0477	0.0415	-0.0061
U.S. TOTALS	108,945,224	106,153,617	-2,791,607	100.0000	100.0000	+0.0000

1978 NEEDS SURVEY

FEBRUARY 10, 1979
TABLE 4

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1978 DOLLARS
CATEGORIES I AND II

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE
ALABAMA	475,684	346,059	-129,625	1.2231	0.9721	-0.2509
ALASKA	153,601	339,630	+186,029	0.3949	0.9540	+0.5591
ARIZONA	252,245	192,200	-60,045	0.6486	0.5399	-0.1086
ARKANSAS	324,648	236,892	-87,756	0.8347	0.6654	-0.1692
CALIFORNIA	3,831,461	4,671,591	+840,130	9.8519	13.1231	+3.2712
COLORADO	443,856	552,880	+109,024	1.1413	1.5531	+0.4118
CONNECTICUT	219,328	346,503	+127,175	0.5639	0.9733	+0.4094
DELAWARE	108,484	94,873	-13,611	0.2789	0.2665	-0.0123
DIST. OF COLUM.	14,184	15,406	+1,222	0.0364	0.0432	+0.0068
FLORIDA	1,698,660	1,874,127	+175,467	4.3678	5.2646	+0.8968
GEORGIA	802,116	668,389	-133,727	2.0625	1.8776	-0.1848
HAWAII	364,535	341,338	-23,197	0.9373	0.9588	+0.0215
IDAHO	203,217	177,542	-25,675	0.5225	0.4987	-0.0237
ILLINOIS	2,074,924	1,380,378	-694,546	5.3353	3.8776	-1.4576
INDIANA	946,736	582,732	-364,004	2.4343	1.6369	-0.7973
IOWA	735,078	497,918	-237,160	1.8901	1.3987	-0.4913
KANSAS	337,382	417,503	+80,121	0.8675	1.1728	+0.3053
KENTUCKY	538,573	457,323	-81,250	1.3848	1.2846	-0.1001
LOUISIANA	443,842	463,088	+19,246	1.1412	1.3008	+0.1596
MAINE	154,432	143,812	-10,620	0.3970	0.4039	+0.0069
MARYLAND	1,373,884	863,742	-510,142	3.5327	2.4263	-1.1063
MASSACHUSETTS	1,127,731	1,027,054	-100,677	2.8997	2.8851	-0.0145
MICHIGAN	1,056,907	1,147,576	+90,669	2.7176	3.2237	+0.5061
MINNESOTA	993,579	718,291	-275,298	2.5548	2.0177	-0.5370
MISSISSIPPI	495,152	316,128	-179,024	1.2732	0.8880	-0.3851
MISSOURI	757,395	803,136	+45,741	1.9475	2.2561	+0.3086
MONTANA	66,990	44,423	-22,567	0.1722	0.1247	-0.0474
NEBRASKA	212,665	162,813	-49,852	0.5468	0.4573	-0.0894
NEVADA	193,156	186,742	-6,414	0.4966	0.5245	+0.0279
NEW HAMPSHIRE	281,823	293,083	+11,260	0.7246	0.8233	+0.0987
NEW JERSEY	1,724,965	1,790,495	+65,530	4.4354	5.0297	+0.5943
NEW MEXICO	112,614	82,091	-30,523	0.2895	0.2306	-0.0588
NEW YORK	4,286,053	3,684,387	-601,666	11.0208	10.3499	-0.6708
NORTH CAROLINA	675,881	605,250	-70,631	1.7379	1.7002	-0.0376
NORTH DAKOTA	45,049	48,178	+3,129	0.1158	0.1353	+0.0195
OHIO	2,375,592	1,743,033	-632,559	6.1084	4.8964	-1.2119
OKLAHOMA	327,161	246,156	-81,005	0.8412	0.6914	-0.1497
OREGON	463,453	425,526	-37,927	1.1916	1.1953	+0.0037
PENNSYLVANIA	1,721,939	1,638,165	-83,774	4.4276	4.6018	+0.1742
RHODE ISLAND	154,776	241,885	+87,109	0.3979	0.6794	+0.2815
SOUTH CAROLINA	463,123	222,042	-241,081	1.1908	0.6237	-0.5670
SOUTH DAKOTA	125,515	143,149	+17,634	0.3227	0.4021	+0.0794
TENNESSEE	549,036	556,558	+7,522	1.4117	1.5634	+0.1517
TEXAS	1,571,816	1,219,866	-351,950	4.0416	3.4267	-0.6148
UTAH	190,844	237,288	+46,444	0.4907	0.6665	+0.1758
VERMONT	129,045	130,035	+990	0.3318	0.3652	+0.0334
VIRGINIA	807,034	768,518	-38,516	2.0751	2.1588	+0.0837
WASHINGTON	733,696	782,627	+48,931	1.8865	2.1985	+0.3120
WEST VIRGINIA	394,849	385,025	-9,824	1.0152	1.0815	+0.0663
WISCONSIN	659,580	736,769	+77,189	1.6959	2.0696	+0.3737
WYOMING	68,255	53,178	-15,087	0.1755	0.1493	-0.0261
AMERICAN SAMOA	32,102	22,894	-9,208	0.0825	0.0643	-0.0181
GUAM	26,250	39,496	+13,246	0.0674	0.1109	+0.0435
MARIANAS GROUP	0	17,330	+17,330	0.0000	0.0486	+0.0486
PUERTO RICO	422,197	356,585	-65,612	1.0856	1.0016	-0.0839
PAC. TR. TERR.	126,051	41,862	-84,199	0.3241	0.1175	-0.2065
VIRGIN ISLANDS	21,115	16,425	-4,690	0.0542	0.0461	-0.0080
U.S. TOTALS	38,890,334	35,597,985	-3,292,349	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 5

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1978 DOLLARS
CATEGORIES I, II AND IVB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE
ALABAMA	671,173	526,726	-144,447	1.1327	0.9741	-0.1585
ALASKA	288,316	434,801	+146,485	0.4866	0.8041	+0.3175
ARIZONA	401,308	391,988	-9,320	0.6773	0.7249	+0.0476
ARKANSAS	388,320	336,032	-52,288	0.6553	0.6214	-0.0338
CALIFORNIA	4,796,269	6,299,037	+1,504,768	8.0914	11.6491	+3.5577
COLORADO	486,024	818,942	+332,918	0.8202	1.5145	+0.6943
CONNECTICUT	427,993	528,924	+100,931	0.7223	0.9781	+0.2558
DELAWARE	218,513	215,329	-3,184	0.3687	0.3982	+0.0295
DIST. OF COLUM.	22,439	15,406	-7,033	0.0378	0.0284	-0.0093
FLORIDA	2,822,565	3,336,469	+513,924	4.7637	6.1703	+1.4066
GEORGIA	1,228,091	1,078,898	-149,193	2.0726	1.9952	-0.0773
HAWAII	708,836	661,083	-47,753	1.1963	1.2225	+0.0262
IDAHO	360,326	262,092	-98,234	0.6081	0.4847	-0.1233
ILLINOIS	2,595,390	1,662,739	-933,651	4.3820	3.0749	-1.3070
INDIANA	1,378,679	894,090	-484,539	2.3268	1.6534	-0.6733
IOWA	904,243	699,896	-204,347	1.5261	1.2943	-0.2317
KANSAS	521,817	707,336	+185,519	0.8806	1.3081	+0.4275
KENTUCKY	976,169	843,245	-132,924	1.6475	1.5594	-0.0880
LOUISIANA	565,482	757,777	+192,295	0.9543	1.4013	+0.4470
MAINE	316,247	298,397	-17,850	0.5337	0.5518	+0.0181
MARYLAND	1,879,108	1,186,807	-692,301	3.1714	2.1948	-0.9765
MASSACHUSETTS	1,846,825	1,570,084	-276,741	3.1169	2.9036	-0.2132
MICHIGAN	2,162,763	1,819,075	-343,638	3.6501	3.3641	-0.2859
MINNESOTA	1,342,445	966,286	-376,159	2.2656	1.7870	-0.4785
MISSISSIPPI	665,140	485,110	-180,030	1.1225	0.8971	-0.2253
MISSOURI	1,271,473	1,481,430	+209,957	2.1459	2.7396	+0.5937
MONTANA	115,158	64,776	-50,382	0.1943	0.1197	-0.0745
NEBRASKA	277,522	213,216	-64,306	0.4683	0.3943	-0.0739
NEVADA	251,867	220,165	-31,702	0.4250	0.4071	-0.0178
NEW HAMPSHIRE	575,733	588,907	+13,174	0.9716	1.0890	+0.1174
NEW JERSEY	2,382,771	2,391,934	+9,163	4.0214	4.4235	+0.4021
NEW MEXICO	136,309	114,742	-21,567	0.2300	0.2121	-0.0178
NEW YORK	6,734,930	5,548,236	-1,186,694	11.3667	10.2606	-1.1060
NORTH CAROLINA	1,145,000	1,043,637	-101,363	1.9324	1.9300	-0.0023
NORTH DAKOTA	60,570	63,007	+2,437	0.1022	0.1165	+0.0143
OHIO	3,935,618	2,568,231	-1,367,387	6.6422	4.7495	-1.8926
OKLAHOMA	459,904	375,263	-84,641	0.7761	0.6939	-0.0821
OREGON	884,162	726,586	-157,576	1.4922	1.3437	-0.1484
PENNSYLVANIA	2,273,361	2,167,295	-106,066	3.8368	4.0080	+0.1712
RHODE ISLAND	248,770	342,523	+93,753	0.4198	0.6334	+0.2136
SOUTH CAROLINA	851,942	473,780	-378,162	1.4378	0.8761	-0.5616
SOUTH DAKOTA	146,159	172,948	+26,789	0.2466	0.3198	+0.0732
TENNESSEE	835,867	922,398	+86,551	1.4106	1.7058	+0.2952
TEXAS	2,344,999	2,222,232	-122,767	3.9577	4.1096	+0.1519
UTAH	219,422	295,048	+75,626	0.3703	0.5456	+0.1753
VERMONT	160,736	161,295	+589	0.2712	0.2982	+0.0270
VIRGINIA	1,264,004	1,283,539	+19,535	2.1333	2.3737	+0.2404
WASHINGTON	1,159,578	1,263,901	+104,323	1.9570	2.3373	+0.3803
WEST VIRGINIA	1,276,639	574,616	-701,993	2.1545	1.0626	-1.0918
WISCONSIN	1,206,184	1,038,760	-167,424	2.0357	1.9210	-0.1146
WYOMING	73,599	62,823	-10,776	0.1242	0.1161	-0.0080
AMERICAN SAMOA	57,183	46,684	-10,499	0.0965	0.0863	-0.0101
GUAM	45,582	43,266	-2,316	0.0769	0.0800	+0.0031
MARIANAS GROUP	0	38,330	+38,330	0.0000	0.0708	+0.0708
PUERTO RICO	727,667	676,612	-51,055	1.2281	1.2512	+0.0231
PAC. TR. TERR.	130,069	57,504	-72,565	0.2195	0.1063	-0.1131
VIRGIN ISLANDS	24,675	32,702	+8,027	0.0416	0.0604	+0.0188
U.S. TOTALS	59,250,919	54,072,955	-5,177,964	100.0000	100.0000	+0.0000

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1978 NEEDS SURVEY

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TABLE 6

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR IMPROVEMENT OF TREATMENT PLANTS TO ACHIEVE SECONDARY LEVEL
THOUSANDS OF 1978 DOLLARS
CATEGORY I

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE
ALABAMA	186,657	150,900	-35,757	1.2682	0.9999	-0.2683
ALASKA	125,201	333,660	+208,459	0.8507	2.2111	+1.3603
ARIZONA	245,653	182,420	-63,233	1.6691	1.2088	-0.4602
ARKANSAS	88,738	65,174	-23,564	0.6029	0.4318	-0.1710
CALIFORNIA	2,485,423	2,691,832	+206,409	16.8881	17.8383	+0.9502
COLORADO	102,789	236,658	+133,870	0.6984	1.5682	+0.8698
CONNECTICUT	146,659	207,071	+60,412	0.9965	1.3722	+0.3757
DELAWARE	817	573	-244	0.0055	0.0037	-0.0017
DIST. OF COLUM.	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	325,192	468,246	+143,054	2.2096	3.1029	+0.8933
GEORGIA	112,042	126,674	+14,632	0.7613	0.8394	+0.0781
HAWAII	364,535	330,266	-34,269	2.4769	2.1886	-0.2883
IDAHO	149,201	79,248	-69,953	1.0137	0.5251	-0.4886
ILLINOIS	57,974	86,707	+28,733	0.3939	0.5745	+0.1806
INDIANA	90,990	46,338	-44,652	0.6182	0.3070	-0.3111
IOWA	268,919	181,778	-87,141	1.8272	1.2046	-0.6226
KANSAS	308,618	294,203	-14,415	2.0970	1.9496	-0.1473
KENTUCKY	53,103	84,195	+31,092	0.3608	0.5579	+0.1971
LOUISIANA	357,828	405,453	+47,625	2.4313	2.6868	+0.2554
MAINE	135,849	121,286	-14,563	0.9230	0.8037	-0.1193
MARYLAND	9,619	20,523	+11,904	0.0585	0.1359	+0.0774
MASSACHUSETTS	801,445	776,080	-25,365	5.4457	5.1429	-0.3027
MICHIGAN	33,057	171,311	+138,254	0.2246	1.1352	+0.9106
MINNESOTA	0	12,584	+12,584	0.0000	0.0833	+0.0833
MISSISSIPPI	74,170	55,795	-18,375	0.5039	0.3697	-0.1342
MISSOURI	749,351	779,568	+30,217	5.0917	5.1660	+0.0743
MONTANA	49,296	37,974	-11,322	0.3349	0.2516	-0.0833
NEBRASKA	185,204	159,948	-25,256	1.2584	1.0599	-0.1984
NEVADA	58,331	65,141	+6,810	0.3963	0.4316	+0.0353
NEW HAMPSHIRE	192,903	197,946	+5,043	1.3107	1.3117	+0.0010
NEW JERSEY	913,144	924,316	+11,172	6.2046	6.1253	-0.0793
NEW MEXICO	75,156	62,084	-13,072	0.5106	0.4114	-0.0992
NEW YORK	2,876,140	2,393,139	-483,001	19.5429	15.8589	-3.6839
NORTH CAROLINA	82,793	149,020	+66,227	0.5625	0.9875	+0.4249
NORTH DAKOTA	44,817	48,178	+3,361	0.3045	0.3192	+0.0147
OHIO	32,749	86,182	+53,433	0.2225	0.5711	+0.3485
OKLAHOMA	10,058	33,475	+23,417	0.0683	0.2218	+0.1534
OREGON	106,036	21,922	-84,114	0.7204	0.1452	-0.5752
PENNSYLVANIA	293,228	506,163	+212,935	1.9924	3.3542	+1.3618
RHODE ISLAND	65,085	144,935	+79,850	0.4422	0.9604	+0.5182
SOUTH CAROLINA	205,425	158,419	-47,006	1.3958	1.0498	-0.3460
SOUTH DAKOTA	26,719	43,304	+16,585	0.1815	0.2869	+0.1054
TENNESSEE	102,122	168,914	+66,792	0.6938	1.1193	+0.4254
TEXAS	9,612	4,882	-4,730	0.0653	0.0323	-0.0329
UTAH	69	6,926	+6,857	0.0004	0.0458	+0.0454
VERMONT	51,842	44,214	-7,628	0.3522	0.2929	-0.0592
VIRGINIA	457,868	439,709	-18,159	3.1111	2.9139	-0.1972
WASHINGTON	462,173	590,292	+128,119	3.1403	3.9117	+0.7713
WEST VIRGINIA	296,258	271,768	-24,490	2.0130	1.8009	-0.2120
WISCONSIN	188,389	100,147	-88,242	1.2800	0.6636	-0.6164
WYOMING	68,265	49,231	-19,034	0.4638	0.3262	-0.1376
AMERICAN SAMOA	32,102	22,894	-9,208	0.2181	0.1517	-0.0664
GUAM	26,250	38,327	+12,077	0.1783	0.2539	+0.0756
MARIANAS GROUP	0	17,330	+17,330	0.0000	0.1148	+0.1148
PUERTO RICO	400,460	336,481	-63,979	2.7210	2.2298	-0.4912
PAC. TR. TERR.	126,051	41,862	-84,199	0.8565	0.2774	-0.5791
VIRGIN ISLANDS	5,581	16,425	+10,844	0.0379	0.1088	+0.0709
U.S. TOTALS	14,716,904	15,090,091	+373,097	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 7

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
TO ACHIEVE MORE STRINGENT TREATEMENT LEVELS
THOUSANDS OF 1978 DOLLARS
CATEGORY II

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE
ALABAMA	289,027	195,159	-93,868	1.1956	0.9516	-0.2439
ALASKA	28,430	5,970	-22,430	0.1174	0.0291	-0.0882
ARIZONA	6,592	9,780	+3,186	0.0272	0.0476	+0.0204
ARKANSAS	235,910	171,718	-64,192	0.9759	0.8373	-0.1385
CALIFORNIA	1,346,038	1,979,759	+633,721	5.5682	9.6536	+4.0854
COLORADO	341,068	316,222	-24,846	1.4109	1.5419	+0.1310
CONNECTICUT	72,669	139,432	+66,763	0.3006	0.6798	+0.3792
DELAWARE	107,667	94,300	-13,367	0.4453	0.4598	+0.0145
DIST. OF COLUM.	14,184	15,406	+1,222	0.0586	0.0751	+0.0165
FLORIDA	1,373,668	1,405,881	+32,413	5.6817	6.8553	+1.1736
GEORGIA	690,074	541,715	-148,359	2.8546	2.6414	-0.2131
HAWAII	0	11,072	+11,072	0.0000	0.0539	+0.0539
IDAHO	54,016	98,294	+44,278	0.2234	0.4792	+0.2558
ILLINOIS	2,016,950	1,293,671	-723,279	8.3436	6.3081	-2.0354
INDIANA	855,748	536,394	-319,352	3.5400	2.6155	-0.9244
IOWA	466,159	316,140	-150,019	1.9284	1.5415	-0.3868
KANSAS	28,764	123,300	+94,536	0.1189	0.6012	+0.4823
KENTUCKY	485,470	373,128	-112,342	2.0082	1.8194	-0.1887
LOUISIANA	86,014	57,635	-28,379	0.3558	0.2810	-0.0747
MAINE	18,583	22,526	+3,943	0.0768	0.1098	+0.0330
MARYLAND	1,365,265	843,219	-522,046	5.6478	4.1116	-1.5361
MASSACHUSETTS	326,286	250,974	-75,312	1.3497	1.2237	-0.1259
MICHIGAN	1,023,850	976,265	-47,585	4.2354	4.7604	+0.5250
MINNESOTA	993,579	705,707	-287,872	4.1102	3.4411	-0.6690
MISSISSIPPI	420,982	260,333	-160,649	1.7415	1.2694	-0.4720
MISSOURI	8,044	23,568	+15,524	0.0332	0.1149	+0.0817
MONTANA	17,694	6,449	-11,245	0.0731	0.0314	-0.0416
NEBRASKA	27,461	2,865	-24,596	0.1136	0.0139	-0.0996
NEVADA	134,925	121,601	-13,224	0.5577	0.5929	+0.0352
NEW HAMPSHIRE	88,920	95,137	+6,217	0.3678	0.4638	+0.0960
NEW JERSEY	811,821	866,179	+54,358	3.3582	4.2236	+0.8653
NEW MEXICO	37,458	20,007	-17,451	0.1549	0.0975	-0.0573
NEW YORK	1,409,913	1,291,248	-118,665	5.8325	6.2963	+0.4638
NORTH CAROLINA	593,088	456,230	-136,858	2.4534	2.2246	-0.2287
NORTH DAKOTA	232	0	-232	0.0009	0.0000	-0.0008
OHIO	2,342,843	1,656,851	-685,992	9.6918	8.0790	-1.6127
OKLAHOMA	317,103	212,681	-104,422	1.3117	1.0370	-0.2746
OREGON	357,417	403,604	+46,187	1.4785	1.9680	+0.4895
PENNSYLVANIA	1,428,711	1,132,002	-296,709	5.9102	5.5198	-0.3903
RHODE ISLAND	89,691	96,950	+7,259	0.3710	0.4727	+0.1017
SOUTH CAROLINA	257,698	63,623	-194,075	1.0660	0.3102	-0.7557
SOUTH DAKOTA	98,796	99,845	+1,049	0.4086	0.4868	+0.0782
TENNESSEE	446,914	387,644	-59,270	1.8487	1.8902	+0.0415
TEXAS	1,562,234	1,214,984	-347,220	6.4625	5.9244	-0.5380
UTAH	190,775	230,362	+39,537	0.7891	1.1232	+0.3341
VERMONT	77,203	85,821	+8,618	0.3193	0.4184	+0.0991
VIRGINIA	349,156	328,809	-20,357	1.4444	1.6033	+0.1589
WASHINGTON	271,523	192,335	-79,188	1.1232	0.9378	-0.1853
WEST VIRGINIA	98,591	113,257	+14,666	0.4078	0.5522	+0.1444
WISCONSIN	471,151	636,622	+165,431	1.9492	3.1042	+1.1550
WYOMING	0	3,947	+3,947	0.0000	0.0192	+0.0192
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	1,169	+1,169	0.0000	0.0056	+0.0056
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	21,737	20,104	-1,633	0.0899	0.0980	+0.0081
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	15,534	0	-15,534	0.0642	0.0000	-0.0641
U.S. TOTALS	24,173,340	20,507,894	-3,665,446	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 8

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CORRECTION OF INFILTRATION/INFLOW CONDITIONS
THOUSANDS OF 1978 DOLLARS
CATEGORY III A

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE
ALABAMA	74,963	86,639	+11,676	2.1871	3.5544	+1.3673
ALASKA	1,865	30,759	+28,894	0.0544	1.2619	+1.2075
ARIZONA	1,530	1,449	-81	0.0446	0.0594	+0.0148
ARKANSAS	24,104	29,864	+5,760	0.7032	1.2252	+0.5220
CALIFORNIA	102,819	75,234	-27,585	2.9998	3.0865	+0.0867
COLORADO	23,190	10,088	-13,102	0.6766	0.4138	-0.2627
CONNECTICUT	35,526	31,237	-4,289	1.0365	1.2815	+0.2450
DELAWARE	4,320	2,780	-1,540	0.1260	0.1140	-0.0119
DIST. OF COLUM.	65,888	0	-65,888	1.9223	0.0000	-1.9222
FLORIDA	108,306	70,964	-37,342	3.1599	2.9113	-0.2484
GEORGIA	47,241	78,273	+31,032	1.3783	3.2112	+1.8329
HAWAII	132	27	-105	0.0038	0.0010	-0.0026
IDAHO	18,779	14,628	-4,151	0.5479	0.6001	+0.0522
ILLINOIS	117,194	144,613	+27,419	3.4192	5.9329	+2.5137
INDIANA	228,643	36,491	-192,152	6.6709	1.4970	-5.1738
IOWA	63,794	80,305	+16,511	1.8612	3.2946	+1.4334
KANSAS	38,338	48,115	+9,777	1.1185	1.9739	+0.8554
KENTUCKY	73,361	74,180	+819	2.1404	3.0433	+0.9029
LOUISIANA	124,923	45,845	-79,078	3.6448	1.8808	-1.7639
MAINE	16,456	13,573	-2,883	0.4801	0.5568	+0.0767
MARYLAND	24,545	7,250	-17,295	0.7161	0.2974	-0.4186
MASSACHUSETTS	19,158	3,827	-15,331	0.5589	0.1569	-0.4018
MICHIGAN	82,949	43,860	-39,089	2.4201	1.7994	-0.6206
MINNESOTA	28,064	28,102	+38	0.8188	1.1529	+0.3341
MISSISSIPPI	124,878	98,584	-26,294	3.6434	4.0445	+0.4011
MISSOURI	21,796	59,834	+38,038	0.6359	2.4547	+1.8188
MONTANA	7,362	2,708	-4,654	0.2147	0.1110	-0.1036
NEBRASKA	5,635	1,071	-4,534	0.1635	0.0439	-0.1195
NEVADA	2,507	1,340	-1,167	0.0731	0.0549	-0.0181
NEW HAMPSHIRE	7,623	6,819	-804	0.2224	0.2797	+0.0573
NEW JERSEY	142,132	137,654	-4,478	4.1469	5.6474	+1.5005
NEW MEXICO	4,826	98	-4,728	0.1408	0.0040	-0.1367
NEW YORK	168,433	103,959	-64,478	4.9142	4.2648	-0.6492
NORTH CAROLINA	65,541	67,041	+1,500	1.9122	2.7504	+0.8382
NORTH DAKOTA	322	514	+192	0.0093	0.0210	+0.0117
OHIO	715,488	256,455	-459,033	20.8753	10.5214	-10.3538
OKLAHOMA	37,451	36,454	-997	1.0926	1.4955	+0.4029
OREGON	131,798	51,379	-80,419	3.8453	2.1078	-1.7374
PENNSYLVANIA	37,775	10,378	-27,397	1.1021	0.4257	-0.6763
RHODE ISLAND	9,669	10,598	+929	0.2821	0.4347	+0.1526
SOUTH CAROLINA	43,631	51,984	+8,353	1.2729	2.1327	+0.8598
SOUTH DAKOTA	5,188	3,141	-2,047	0.1513	0.1288	-0.0224
TENNESSEE	59,662	124,660	+64,998	1.7407	5.1143	+3.3736
TEXAS	203,106	214,956	+11,850	5.9259	8.8188	+2.8929
UTAH	47,963	40,689	-7,274	1.3993	1.6693	+0.2700
VERMONT	1,880	2,260	+380	0.0548	0.0927	+0.0379
VIRGINIA	33,700	11,860	-21,840	0.9832	0.4865	-0.4966
WASHINGTON	122,521	83,474	-39,047	3.5747	3.4246	-0.1500
WEST VIRGINIA	8,337	1,636	-6,701	0.2449	0.0671	-0.1777
WISCONSIN	82,390	76,702	-5,688	2.4038	3.1468	+0.7430
WYOMING	2,130	7,863	+5,733	0.0621	0.3225	+0.2604
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	528	596	+68	0.0154	0.0244	+0.0090
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	6,915	14,531	+7,616	0.2017	0.5961	+0.3944
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	98	115	+17	0.0028	0.0047	+0.0019
U.S. TOTALS	3,427,427	2,437,452	-989,975	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 9

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CORRECTION OF MAJOR REHABILITATION AND REPLACEMENT
THOUSANDS OF 1978 DOLLARS
CATEGORY III B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE
ALABAMA	2,919	2,376	-543	0.0468	0.0487	+0.0019
ALASKA	76	84	+8	0.0012	0.0017	+0.0005
ARIZONA	0	860	+860	0.0000	0.0176	+0.0176
ARKANSAS	0	2,016	+2,016	0.0000	0.0413	+0.0413
CALIFORNIA	10,613	84,100	+73,487	0.1702	1.7241	+1.5539
COLORADO	269,937	90,425	-179,512	4.3309	1.8538	-2.4770
CONNECTICUT	11,398	18,881	+7,483	0.1828	0.3870	+0.2042
DELAWARE	1,667	495	-1,172	0.0267	0.0101	-0.0165
DIST. OF COLUM.	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	7,384	0	-7,384	0.1184	0.0000	-0.1183
GEORGIA	546	1,560	+1,014	0.0087	0.0319	+0.0232
HAWAII	0	0	+0	0.0000	0.0000	+0.0000
IDAHO	822	315	-507	0.0131	0.0064	-0.0066
ILLINOIS	65,980	3,858	-62,122	1.0586	0.0790	-0.9795
INDIANA	65,371	15,720	-49,651	1.0488	0.3222	-0.7265
IOWA	0	208	+208	0.0000	0.0042	+0.0042
KANSAS	930	16,834	+15,904	0.0149	0.3451	+0.3302
KENTUCKY	0	0	+0	0.0000	0.0000	+0.0000
LOUISIANA	2,563	12,349	+9,786	0.0411	0.2531	+0.2120
MAINE	4,228	14,059	+9,831	0.0678	0.2882	+0.2204
MARYLAND	1,282,453	1,347,912	+65,459	20.5761	27.6336	+7.0575
MASSACHUSETTS	53,068	61,937	+8,869	0.8514	1.2697	+0.4183
MICHIGAN	657,112	32,685	-624,427	10.5429	0.6700	-9.8728
MINNESOTA	11,592	12,493	+901	0.1859	0.2561	+0.0702
MISSISSIPPI	2,346	0	-2,345	0.0382	0.0000	-0.0381
MISSOURI	0	7,323	+7,323	0.0000	0.1501	+0.1501
MONTANA	1,323	1,479	+156	0.0212	0.0303	+0.0091
NEBRASKA	0	0	+0	0.0000	0.0000	+0.0000
NEVADA	24	369	+345	0.0003	0.0075	+0.0072
NEW HAMPSHIRE	4,530	16,440	+11,910	0.0726	0.3370	+0.2644
NEW JERSEY	31,628	1,414	-30,214	0.5074	0.0289	-0.4784
NEW MEXICO	890	1,203	+313	0.0142	0.0246	+0.0104
NEW YORK	2,869,157	2,762,267	-106,890	46.0338	56.6295	+10.5957
NORTH CAROLINA	0	0	+0	0.0000	0.0000	+0.0000
NORTH DAKOTA	1,542	1,542	+0	0.0247	0.0316	+0.0069
OHIO	405,938	8,031	-397,967	6.5139	0.1646	-6.3492
OKLAHOMA	14,552	20,961	+6,379	0.2339	0.4297	+0.1958
OREGON	39,571	38,901	-670	0.6348	0.7975	+0.1627
PENNSYLVANIA	0	0	+0	0.0000	0.0000	+0.0000
RHODE ISLAND	227	2,565	+2,338	0.0036	0.0525	+0.0489
SOUTH CAROLINA	0	0	+0	0.0000	0.0000	+0.0000
SOUTH DAKOTA	171	1,194	+1,023	0.0027	0.0244	+0.0217
TENNESSEE	0	0	+0	0.0000	0.0000	+0.0000
TEXAS	70,225	67,524	-2,701	1.1267	1.3843	+0.2576
UTAH	0	0	+0	0.0000	0.0000	+0.0000
VERMONT	6,651	10,896	+4,245	0.1067	0.2233	+0.1166
VIRGINIA	1,226	1,529	+303	0.0196	0.0313	+0.0117
WASHINGTON	155,230	60,056	-95,174	2.4905	1.2312	-1.2592
WEST VIRGINIA	78	665	+587	0.0012	0.0136	+0.0124
WISCONSIN	163,029	143,853	-19,176	2.6156	2.9491	+0.3335
WYOMING	0	0	+0	0.0000	0.0000	+0.0000
AMERICAN SAMOA	2,272	1,189	-1,033	0.0364	0.0243	-0.0120
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	13,295	9,218	-4,077	0.2133	0.1889	-0.0243
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	6,232,711	4,877,786	-1,354,925	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 10

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF ELIGIBLE NEW COLLECTORS AND APPURTENANCES
THOUSANDS OF 1978 DOLLARS
CATEGORY IV A

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE
ALABAMA	234,418	331,636	+97,218	1.2153	1.7433	+0.5280
ALASKA	78,189	40,968	-37,221	0.4053	0.2153	-0.1899
ARIZONA	118,094	118,578	+484	0.6122	0.6233	+0.0110
ARKANSAS	122,641	134,018	+11,377	0.6358	0.7045	+0.0686
CALIFORNIA	952,982	1,415,363	+462,381	4.9406	7.4403	+2.4997
COLORADO	9,222	28,712	+19,490	0.0478	0.1509	+0.1031
CONNECTICUT	531,552	405,113	-126,439	2.7557	2.1296	-0.6261
DELAWARE	36,992	41,745	+4,753	0.1917	0.2194	+0.0276
DIST. OF COLUM.	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	1,294,634	1,560,561	+265,927	6.7118	8.2036	+1.4917
GEORGIA	239,834	378,532	+138,699	1.2433	1.9898	+0.7464
HAWAII	146,058	198,066	+52,008	0.7572	1.0411	+0.2839
IDAHO	106,843	112,352	+5,509	0.5539	0.5906	+0.0367
ILLINOIS	378,854	162,896	-215,958	1.9641	0.8563	-1.1077
INDIANA	521,245	338,590	-182,655	2.7023	1.7799	-0.9224
IOWA	105,574	123,294	+17,720	0.5473	0.6481	+0.1008
KANSAS	87,667	121,127	+33,460	0.4544	0.6367	+0.1822
KENTUCKY	257,845	575,541	+317,696	1.3367	3.0255	+1.6887
LOUISIANA	110,299	320,902	+210,603	0.5718	1.6869	+1.1151
MAINE	208,388	220,290	+11,902	1.0803	1.1580	+0.0776
MARYLAND	69,009	221,064	+152,055	0.3577	1.1620	+0.8043
MASSACHUSETTS	948,510	754,897	-193,613	4.9174	3.9683	-0.9490
MICHIGAN	1,397,841	987,421	-410,420	7.2469	5.1907	-2.0562
MINNESOTA	193,576	153,599	-39,977	1.0035	0.8074	-0.1961
MISSISSIPPI	59,963	157,989	+98,026	0.3108	0.8305	+0.5196
MISSOURI	181,302	228,818	+47,516	0.9399	1.2028	+0.2629
MONTANA	20,315	23,787	+3,472	0.1053	0.1250	+0.0197
NEBRASKA	16,384	32,588	+16,204	0.0849	0.1713	+0.0863
NEVADA	30,244	38,204	+7,960	0.1567	0.2008	+0.0440
NEW HAMPSHIRE	245,380	269,549	+24,169	1.2721	1.4169	+0.1448
NEW JERSEY	451,595	655,609	+204,014	2.3412	3.4464	+1.1052
NEW MEXICO	26,451	42,709	+16,258	0.1371	0.2245	+0.0873
NEW YORK	3,690,098	2,436,873	-1,253,225	19.1309	12.8103	-6.3205
NORTH CAROLINA	167,863	479,955	+312,092	0.8702	2.5230	+1.6527
NORTH DAKOTA	6,249	3,584	-2,665	0.0323	0.0188	-0.0135
OHIO	1,107,467	683,618	-423,849	5.7415	3.5936	-2.1478
OKLAHOMA	75,187	139,423	+64,236	0.3897	0.7329	+0.3431
OREGON	276,136	287,903	+11,767	1.4315	1.5134	+0.0818
PENNSYLVANIA	1,080,863	982,675	-98,188	5.6036	5.1657	-0.4378
RHODE ISLAND	262,384	260,744	-1,640	1.3602	1.3706	+0.0103
SOUTH CAROLINA	191,832	314,611	+122,779	0.9945	1.6538	+0.6593
SOUTH DAKOTA	3,515	5,701	+2,186	0.0182	0.0299	+0.0117
TENNESSEE	349,621	512,333	+162,712	1.8125	2.6932	+0.8806
TEXAS	523,476	566,882	+43,406	2.7138	2.9800	+0.2661
UTAH	39,760	61,460	+21,700	0.2061	0.3230	+0.1169
VERMONT	88,778	77,557	-11,221	0.4602	0.4076	-0.0525
VIRGINIA	221,381	438,912	+217,531	1.1477	2.3072	+1.1595
WASHINGTON	445,881	460,554	+14,673	2.3116	2.4210	+0.1094
WEST VIRGINIA	711,818	514,779	-197,039	3.6903	2.7061	-0.9842
WISCONSIN	479,147	269,375	-209,772	2.4840	1.4160	-1.0680
WYOMING	765	1,244	+479	0.0039	0.0065	+0.0025
AMERICAN SAMOA	8,635	9,445	+810	0.0447	0.0496	+0.0048
GUAM	35,228	996	-34,232	0.1826	0.0052	-0.1773
MARIANAS GROUP	0	17,992	+17,992	0.0000	0.0945	+0.0945
PUERTO RICO	272,824	257,485	-15,339	1.4144	1.3535	-0.0608
PAC. TR. TERR.	40,575	32,783	-7,792	0.2103	0.1723	-0.0380
VIRGIN ISLANDS	27,259	11,303	-15,956	0.1413	0.0594	-0.0819
U.S. TOTALS	19,288,658	19,022,705	-265,953	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE II

1976 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF NEW INTERCEPTORS AND APPURTENANCES
THOUSANDS OF 1978 DOLLARS
CATEGORY IV B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE
ALABAMA	195,489	180,667	-14,822	0.9601	0.9778	+0.0177
ALASKA	134,715	95,171	-39,544	0.6616	0.5151	-0.1464
ARIZONA	149,063	199,788	+50,725	0.7321	1.0813	+0.3492
ARKANSAS	63,672	99,140	+35,468	0.3127	0.5366	+0.2239
CALIFORNIA	962,808	1,627,446	+664,638	4.7287	8.8089	+4.0802
COLORADO	42,168	266,062	+223,894	0.2071	1.4401	+1.2330
CONNECTICUT	208,665	182,421	-26,244	1.0248	0.9873	-0.0374
DELAWARE	110,029	120,456	+10,427	0.5404	0.6519	+0.1115
DIST. OF COLUM.	8,255	0	-8,255	0.0405	0.0000	-0.0404
FLORIDA	1,123,885	1,462,342	+338,457	5.5199	7.9152	+2.3953
GEORGIA	425,975	410,509	-15,466	2.0921	2.2219	+0.1298
HAWAII	344,301	319,745	-24,556	1.6910	1.7306	+0.0396
IDAHO	157,109	84,550	-72,559	0.7716	0.4576	-0.3139
ILLINOIS	521,466	282,361	-239,105	2.5611	1.5283	-1.0327
INDIANA	431,943	311,358	-120,585	2.1214	1.6852	-0.4361
IOWA	169,165	201,978	+32,813	0.8308	1.0932	+0.2624
KANSAS	184,435	289,833	+105,398	0.9058	1.5687	+0.6629
KENTUCKY	437,596	385,922	-51,674	2.1492	2.0888	-0.0603
LOUISIANA	121,640	294,689	+173,049	0.5974	1.5950	+0.9976
MAINE	161,815	154,585	-7,230	0.7947	0.8367	+0.0420
MARYLAND	505,224	323,065	-182,159	2.4813	1.7486	-0.7326
MASSACHUSETTS	719,094	543,030	-176,064	3.5317	2.9392	-0.5924
MICHIGAN	1,105,856	671,499	-434,357	5.4313	3.6346	-1.7966
MINNESOTA	348,866	247,995	-100,871	1.7134	1.3423	-0.3710
MISSISSIPPI	169,988	168,982	-1,006	0.8348	0.9146	+0.0798
MISSOURI	514,078	678,294	+164,216	2.5248	3.6714	+1.1466
MONTANA	48,168	20,353	-27,815	0.2365	0.1101	-0.1263
NEBRASKA	64,857	50,403	-14,454	0.3185	0.2728	-0.0456
NEVADA	58,711	33,423	-25,238	0.2883	0.1808	-0.1073
NEW HAMPSHIRE	293,910	295,824	+1,914	1.4435	1.6012	+0.1577
NEW JERSEY	657,806	601,439	-56,367	3.2307	3.2554	+0.0247
NEW MEXICO	23,695	32,651	+8,956	0.1163	0.1767	+0.0604
NEW YORK	2,448,877	1,863,849	-585,028	12.0275	10.0884	-1.9389
NORTH CAROLINA	469,119	438,387	-30,732	2.3040	2.3728	+0.0688
NORTH DAKOTA	15,521	14,829	-692	0.0762	0.0802	+0.0040
OHIO	1,560,026	825,198	-734,828	7.6619	4.4665	-3.1953
OKLAHOMA	132,743	129,107	-3,636	0.6519	0.6988	+0.0469
OREGON	420,709	301,060	-119,649	2.0662	1.6295	-0.4366
PENNSYLVANIA	551,422	529,130	-22,292	2.7082	2.8640	+0.1558
RHODE ISLAND	93,994	100,638	+6,644	0.4616	0.5447	+0.0831
SOUTH CAROLINA	388,819	251,738	-137,081	1.9096	1.3625	-0.5470
SOUTH DAKOTA	20,644	29,799	+9,155	0.1013	0.1612	+0.0599
TENNESSEE	286,811	365,840	+79,029	1.4086	1.9801	+0.5715
TEXAS	773,183	1,002,366	+229,183	3.7974	5.4255	+1.6281
UTAH	28,578	57,760	+29,182	0.1403	0.3126	+0.1723
VERMONT	31,661	31,260	-401	0.1555	0.1691	+0.0136
VIRGINIA	456,970	515,021	+58,051	2.2443	2.7876	+0.5433
WASHINGTON	425,882	481,274	+55,392	2.0916	2.6049	+0.5133
WEST VIRGINIA	881,760	189,591	-692,169	4.3307	1.0261	-3.3044
WISCONSIN	546,604	301,991	-244,613	2.6846	1.6345	-1.0500
WYOMING	5,334	9,645	+4,311	0.0261	0.0521	+0.0260
AMERICAN SAMOA	25,081	23,790	-1,291	0.1231	0.1287	+0.0056
GUAM	19,332	3,770	-15,562	0.0949	0.0203	-0.0744
MARIANAS GROUP	0	21,000	+21,000	0.0000	0.1136	+0.1136
PUERTO RICO	305,470	320,027	+14,557	1.5003	1.7322	+0.2319
PAC. TR. TERR.	4,008	15,642	+11,634	0.0196	0.0846	+0.0650
VIRGIN ISLANDS	3,560	16,277	+12,717	0.0174	0.0880	+0.0706
U.S. TOTALS	20,360,585	18,474,970	-1,885,615	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 12

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CORRECTION OF COMBINED SEWER OVERFLOWS
THOUSANDS OF 1978 DOLLARS
CATEGORY V

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE
ALABAMA	0	0	+0	0.0000	0.0000	+0.0000
ALASKA	3,429	9,165	+5,736	0.0165	0.0355	+0.0190
ARIZONA	0	0	+0	0.0000	0.0000	+0.0000
ARKANSAS	53,186	0	-53,186	0.2563	0.0000	-0.2562
CALIFORNIA	437,490	167,715	-269,775	2.1088	0.6514	-1.4572
COLORADO	3,826	661	-3,165	0.0184	0.0025	-0.0158
CONNECTICUT	439,992	398,912	-41,080	2.1209	1.5496	-0.5712
DELAWARE	45,136	128,961	+83,825	0.2175	0.5009	+0.2834
DIST. OF COLUM.	169,691	170,671	+1,070	0.8175	0.6629	-0.1545
FLORIDA	558	8,533	+7,965	0.0027	0.0331	+0.0304
GEORGIA	342,192	218,732	-123,460	1.6494	0.8496	-0.7997
HAWAII	0	0	+0	0.0000	0.0000	+0.0000
IDAHO	9,734	57,256	+47,522	0.0469	0.2224	+0.1755
ILLINOIS	2,937,137	2,131,730	-805,407	14.1579	8.2808	-5.8769
INDIANA	1,400,663	2,920,755	+1,520,092	6.7516	11.3459	+4.5943
IOWA	103,137	192,885	+89,748	0.4971	0.7492	+0.2521
KANSAS	122,643	209,776	+87,133	0.5911	0.8148	+0.2237
KENTUCKY	150,161	592,419	+442,258	0.7238	2.3012	+1.5774
LOUISIANA	0	0	+0	0.0000	0.0000	+0.0000
MAINE	547,830	1,092,520	+544,690	2.6407	4.2439	+1.6032
MARYLAND	53,914	147,131	+93,217	0.2598	0.5715	+0.3117
MASSACHUSETTS	995,327	1,036,200	+40,873	4.7977	4.0252	-0.7724
MICHIGAN	1,530,710	1,602,291	+71,581	7.3785	6.2242	-1.1542
MINNESOTA	253,778	187,214	-66,564	1.2232	0.7272	-0.4959
MISSISSIPPI	0	33,286	+33,286	0.0000	0.1292	+0.1292
MISSOURI	1,467,849	757,919	-709,930	7.0755	2.9441	-4.1312
MONTANA	0	33,236	+33,236	0.0000	0.1290	+0.1290
NEBRASKA	165,986	70,806	-95,180	0.8001	0.2750	-0.5250
NEVADA	16,658	0	-16,658	0.0802	0.0000	-0.0801
NEW HAMPSHIRE	349,842	272,996	-76,846	1.6863	1.0604	-0.6258
NEW JERSEY	687,139	1,009,763	+322,574	3.3124	3.9225	+0.6101
NEW MEXICO	0	0	+0	0.0000	0.0000	+0.0000
NEW YORK	3,025,651	3,305,138	+279,487	14.5846	12.8391	-1.7454
NORTH CAROLINA	0	67,342	+67,342	0.0000	0.2615	+0.2615
NORTH DAKOTA	14,582	13,705	-877	0.0702	0.0532	-0.0169
OHIO	2,005,735	3,261,614	+1,255,879	9.6682	12.6700	+3.0018
OKLAHOMA	0	0	+0	0.0000	0.0000	+0.0000
OREGON	239,106	431,333	+192,227	1.1525	1.6755	+0.5230
PENNSYLVANIA	932,093	2,198,106	+1,266,013	4.4929	8.5387	+4.0458
RHODE ISLAND	300,140	329,342	+29,202	1.4467	1.2793	-0.1673
SOUTH CAROLINA	0	0	+0	0.0000	0.0000	+0.0000
SOUTH DAKOTA	1,338	24,057	+22,719	0.0064	0.0934	+0.0870
TENNESSEE	208,319	198,462	-9,857	1.0041	0.7709	-0.2331
TEXAS	55,417	39,148	-16,269	0.2671	0.1520	-0.1150
UTAH	0	2,199	+2,199	0.0000	0.0085	+0.0085
VERMONT	183,716	208,981	+25,265	0.8855	0.8117	-0.0736
VIRGINIA	278,259	272,811	-5,448	1.3412	1.0597	-0.2814
WASHINGTON	387,934	893,318	+505,334	1.8702	3.4701	+1.5999
WEST VIRGINIA	484,573	754,201	+269,628	2.3357	2.9297	+0.5940
WISCONSIN	314,915	268,905	-46,010	1.5179	1.0445	-0.4733
WYOMING	0	3,164	+3,164	0.0000	0.0122	+0.0122
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	25,675	19,360	-6,315	0.1237	0.0751	-0.0486
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	20,745,499	25,742,719	+4,997,220	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 13

1976 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR TREATMENT AND/OR CONTROL OF STORMWATERS
THOUSANDS OF 1978 DOLLARS
CATEGORY VI

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE	1976 EPA ESTIMATE	1978 EPA ASSESSMENT	CHANGE
ALABAMA	368,362	1,428,370	+1,060,008	0.5990	2.3161	+1.7171
ALASKA	17,269	122,010	+104,741	0.0280	0.1978	+0.1698
ARIZONA	594,223	531,491	-62,732	0.9662	0.8618	-0.1043
ARKANSAS	131,852	610,525	+478,673	0.2144	0.9899	+0.7755
CALIFORNIA	6,018,821	4,047,876	-1,970,945	9.7875	6.5637	-3.2237
COLORADO	197,752	319,494	+121,742	0.3215	0.5180	+0.1965
CONNECTICUT	1,681,671	2,441,443	+759,772	2.7346	3.9588	+1.2242
DELAWARE	106,019	270,383	+164,364	0.1724	0.4384	+0.2660
DIST. OF COLUM.	130,394	184,561	+54,157	0.2120	0.2992	+0.0872
FLORIDA	9,358,283	6,909,125	-2,449,158	15.2180	11.2033	-4.0146
GEORGIA	551,036	1,068,665	+517,629	0.8960	1.7328	+0.8368
HAWAII	529,446	205,653	-323,793	0.8609	0.3334	-0.5274
IDAHO	10,059	41,671	+31,612	0.0163	0.0675	+0.0512
ILLINOIS	2,267,296	1,855,135	-412,161	3.6869	3.0081	-0.6787
INDIANA	870,352	1,633,752	+763,400	1.4153	2.6491	+1.2338
IOWA	153,032	482,182	+329,150	0.2488	0.7818	+0.5330
KANSAS	141,859	418,709	+276,850	0.2306	0.6789	+0.4483
KENTUCKY	173,731	925,625	+751,894	0.2825	1.5009	+1.2184
LOUISIANA	286,016	940,536	+654,520	0.4651	1.5250	+1.0599
MAINE	140,397	679,106	+538,709	0.2283	1.1011	+0.8728
MARYLAND	1,281,696	1,191,849	-89,847	2.0842	1.9326	-0.1515
MASSACHUSETTS	2,651,241	3,205,351	+554,110	4.3113	5.1975	+0.8862
MICHIGAN	1,511,328	1,719,430	+208,102	2.4576	2.7880	+0.3304
MINNESOTA	313,211	527,889	+214,678	0.5093	0.8559	+0.3466
MISSISSIPPI	240,384	415,338	+174,954	0.3909	0.6734	+0.2825
MISSOURI	585,125	1,172,799	+587,674	0.9515	1.9017	+0.9502
MONTANA	9,219	26,079	+16,860	0.0149	0.0422	+0.0273
NEBRASKA	74,302	131,578	+57,276	0.1208	0.2133	+0.0925
NEVADA	141,606	217,645	+76,039	0.2302	0.3529	+0.1227
NEW HAMPSHIRE	149,531	958,894	+809,363	0.2431	1.5548	+1.3117
NEW JERSEY	9,138,512	5,378,994	-3,759,518	14.8606	8.7221	-6.1384
NEW MEXICO	41,374	84,984	+43,610	0.0672	0.1377	+0.0705
NEW YORK	2,460,407	2,026,998	-433,409	4.0010	3.2868	-0.7141
NORTH CAROLINA	195,798	777,296	+581,498	0.3183	1.2603	+0.9420
NORTH DAKOTA	2,308	16,779	+14,471	0.0037	0.0271	+0.0234
OHIO	5,398,476	3,558,954	-1,839,522	8.7787	5.7709	-3.0077
OKLAHOMA	273,084	411,963	+138,879	0.4440	0.6679	+0.2239
OREGON	274,100	901,669	+627,569	0.4457	1.4620	+1.0163
PENNSYLVANIA	3,518,786	2,609,314	-909,472	5.7220	4.2310	-1.4909
RHODE ISLAND	98,761	347,016	+248,255	0.1606	0.5626	+0.4020
SOUTH CAROLINA	168,268	379,781	+211,513	0.2736	0.6158	+0.3422
SOUTH DAKOTA	6,843	30,032	+23,189	0.0111	0.0486	+0.0375
TENNESSEE	460,382	1,313,997	+853,615	0.7486	2.1306	+1.3820
TEXAS	3,985,015	3,773,298	-211,717	6.4802	6.1184	-0.3617
UTAH	186,475	171,921	-14,554	0.3032	0.2787	-0.0244
VERMONT	0	0	+0	0.0000	0.0000	+0.0000
VIRGINIA	1,761,356	1,975,668	+214,312	2.8642	3.2035	+0.3393
WASHINGTON	282,326	1,374,248	+1,091,922	0.4591	2.2283	+1.7692
WEST VIRGINIA	22,417	220,100	+197,683	0.0364	0.3568	+0.3204
WISCONSIN	2,171,813	1,230,055	-941,758	3.5317	1.9945	-1.5371
WYOMING	0	0	+0	0.0000	0.0000	+0.0000
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	362,706	404,121	+41,415	0.5898	0.6552	+0.0654
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	61,494,744	61,670,352	+175,608	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 14

1976 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1977 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1978 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I THRU V

	1978 EPA * ASSESSMENT	1977 POPULATION	COSTS PER CAPITA (1977)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	947,377	3,690	256	4,140	228
ALASKA	515,777	407	1,267	667	773
ARIZONA	512,875	2,296	223	4,149	123
ARKANSAS	501,930	2,144	234	2,970	169
CALIFORNIA	8,041,449	21,896	367	26,786	300
COLORADO	948,828	2,619	362	3,868	245
CONNECTICUT	1,383,067	3,108	445	3,741	369
DELAWARE	389,310	582	668	841	462
DIST. OF COLUM.	186,077	690	269	661	281
FLORIDA	4,976,527	8,452	588	15,049	330
GEORGIA	1,755,995	5,048	347	7,053	248
HAWAII	859,176	895	959	1,366	628
IDAHO	446,643	857	521	1,183	377
ILLINOIS	4,105,636	11,245	365	12,358	332
INDIANA	4,205,646	5,330	789	5,732	733
IOWA	1,096,588	2,879	380	3,101	353
KANSAS	1,103,188	2,326	474	2,517	438
KENTUCKY	2,085,385	3,458	603	4,224	493
LOUISIANA	1,136,873	3,921	289	4,659	244
MAINE	1,638,839	1,085	1,510	1,222	1,341
MARYLAND	2,910,164	4,139	703	5,583	521
MASSACHUSETTS	3,426,945	5,782	592	6,614	518
MICHIGAN	4,485,332	9,129	491	10,314	434
MINNESOTA	1,347,694	3,975	339	4,505	299
MISSISSIPPI	774,969	2,389	324	2,740	282
MISSOURI	2,535,324	4,801	528	5,225	485
MONTANA	125,986	761	165	802	157
NEBRASKA	317,681	1,561	203	1,734	183
NEVADA	260,078	633	410	1,141	227
NEW HAMPSHIRE	1,154,711	849	1,360	1,306	884
NEW JERSEY	4,196,374	7,329	572	8,747	479
NEW MEXICO	158,752	1,190	133	1,436	110
NEW YORK	14,156,469	17,924	789	18,922	748
NORTH CAROLINA	1,657,975	5,525	300	7,419	223
NORTH DAKOTA	82,352	653	126	690	119
OHIO	6,777,949	10,701	633	12,031	563
OKLAHOMA	572,101	2,811	203	3,396	168
OREGON	1,536,102	2,376	646	3,209	478
PENNSYLVANIA	5,358,454	11,785	454	12,365	433
RHODE ISLAND	945,772	935	1,011	1,033	915
SOUTH CAROLINA	840,375	2,876	292	3,700	227
SOUTH DAKOTA	207,041	689	300	730	283
TENNESSEE	1,757,853	4,299	408	5,573	315
TEXAS	3,110,742	12,830	242	18,069	172
UTAH	399,396	1,268	314	1,688	236
VERMONT	460,989	483	954	607	759
VIRGINIA	2,008,651	5,135	391	6,755	297
WASHINGTON	2,761,333	3,658	754	4,417	625
WEST VIRGINIA	1,845,897	1,859	992	2,003	921
WISCONSIN	1,797,595	4,651	386	5,553	323
WYOMING	75,094	406	184	486	155
AMERICAN SAMOA	57,318	29	1,976	40	1,432
GUAM	44,858	93	482	275	163
MARIANAS GROUP	56,322	12	4,693	35	1,609
PUERTO RICO	977,206	3,282	297	4,700	207
PAC. TR. TERR.	90,287	114	791	170	531
VIRGIN ISLANDS	44,120	95	464	116	380
U.S. TOTALS	106,153,617	219,955	482	270,414	392

FEBRUARY 10, 1979
TABLE 15

1978 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1977 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1978 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I II IVB

	1978 EPA * ASSESSMENT	1977 POPULATION	COSTS PER CAPITA (1977)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	526,726	3,690	142	4,140	127
ALASKA	436,931	407	1,068	667	651
ARIZONA	391,988	2,296	170	4,149	94
ARKANSAS	336,032	2,144	156	2,970	113
CALIFORNIA	6,299,037	21,896	287	26,786	235
COLORADO	818,942	2,619	312	3,868	211
CONNECTICUT	528,924	3,108	170	3,741	141
DELAWARE	215,329	582	369	841	256
DIST. OF COLUM.	15,406	690	22	661	23
FLORIDA	3,336,469	8,452	394	15,049	221
GEORGIA	1,078,898	5,048	213	7,053	152
HAWAII	661,083	895	738	1,366	483
IDAHO	262,092	857	305	1,183	221
ILLINOIS	1,662,739	11,245	147	12,358	134
INDIANA	894,090	5,330	167	5,732	155
IOWA	699,896	2,879	243	3,101	225
KANSAS	707,336	2,326	304	2,517	281
KENTUCKY	843,245	3,458	243	4,224	199
LOUISIANA	757,777	3,921	193	4,659	162
MAINE	298,397	1,095	275	1,222	244
MARYLAND	1,186,837	4,139	286	5,583	212
MASSACHUSETTS	1,570,084	5,782	271	6,614	237
MICHIGAN	1,819,075	9,129	199	10,314	176
MINNESOTA	966,286	3,975	243	4,505	214
MISSISSIPPI	485,110	2,389	203	2,740	177
MISSOURI	1,481,430	4,801	308	5,225	283
MONTANA	64,776	761	85	802	80
NEBRASKA	213,216	1,561	136	1,734	122
NEVADA	220,165	633	347	1,141	192
NEW HAMPSHIRE	588,907	849	693	1,306	450
NEW JERSEY	2,391,934	7,329	326	8,747	273
NEW MEXICO	114,742	1,190	96	1,436	79
NEW YORK	5,548,236	17,924	309	18,922	293
NORTH CAROLINA	1,043,637	5,525	188	7,419	140
NORTH DAKOTA	63,007	653	96	690	91
OHIO	2,568,231	10,701	235	12,031	213
OKLAHOMA	375,263	2,811	133	3,396	110
OREGON	726,586	2,376	305	3,209	226
PENNSYLVANIA	2,167,295	11,785	183	12,365	175
RHODE ISLAND	342,523	935	366	1,033	331
SOUTH CAROLINA	473,780	2,876	164	3,700	128
SOUTH DAKOTA	172,948	689	251	730	236
TENNESSEE	922,398	4,299	214	5,573	165
TEXAS	2,222,232	12,830	173	18,069	122
UTAH	295,046	1,268	232	1,688	174
VERMONT	161,295	483	333	607	265
VIRGINIA	1,283,539	5,135	249	6,755	190
WASHINGTON	1,263,901	3,656	345	4,417	286
WEST VIRGINIA	574,616	1,859	309	2,003	286
WISCONSIN	1,038,760	4,651	223	5,553	187
WYOMING	62,822	406	154	484	129
AMERICAN SAMOA	46,684	29	1,609	40	1,167
GUAM	43,266	93	465	275	157
MARIANAS GROUP	38,330	12	3,194	35	1,095
PUERTO RICO	676,612	3,282	206	4,700	143
PAC. TR. TERR.	57,504	114	504	170	338
VIRGIN ISLANDS	32,702	95	344	116	281
U.S. TOTALS	54,072,955	219,555	245	270,414	199

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1978 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1977 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1978 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY I

	1978 EPA * ASSESSMENT	1977 POPULATION	COSTS PER CAPITA (1977)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	150,900	3,690	40	4,140	36
ALASKA	333,660	407	819	667	500
ARIZONA	182,420	2,296	79	4,149	43
ARKANSAS	65,174	2,144	30	2,970	21
CALIFORNIA	2,691,832	21,896	122	26,786	100
COLORADO	236,656	2,619	90	3,868	61
CONNECTICUT	207,071	3,108	66	3,741	55
DELAWARE	573	582	0	841	0
DIST. OF COLUM.	0	690	0	661	0
FLORIDA	468,266	8,452	55	15,049	31
GEORGIA	126,674	5,048	25	7,653	17
HAWAII	330,266	895	369	1,366	241
IDAHO	79,248	857	92	1,193	66
ILLINOIS	86,707	11,245	7	12,358	7
INDIANA	46,338	5,330	8	5,732	8
IOWA	181,778	2,879	63	3,101	58
KANSAS	296,203	2,326	126	2,517	116
KENTUCKY	84,195	3,458	24	4,224	19
LOUISIANA	405,453	3,921	103	4,659	87
MAINE	121,286	1,095	111	1,222	99
MARYLAND	20,523	4,139	4	5,583	3
MASSACHUSETTS	776,080	5,782	134	6,614	117
MICHIGAN	171,311	5,129	33	10,314	16
MINNESOTA	12,584	3,575	3	4,505	2
MISSISSIPPI	55,795	2,389	23	2,740	20
MISSOURI	779,568	4,801	162	5,225	149
MONTANA	37,974	761	49	802	47
NEBRASKA	159,948	1,561	102	1,734	92
NEVADA	65,161	633	102	1,141	57
NEW HAMPSHIRE	197,946	849	233	1,306	151
NEW JERSEY	924,316	7,329	126	8,747	105
NEW MEXICO	62,084	1,190	52	1,436	43
NEW YORK	2,393,139	17,924	133	18,922	126
NORTH CAROLINA	149,020	5,525	26	7,419	20
NORTH DAKOTA	48,178	653	73	690	69
OHIO	86,182	10,701	8	12,031	7
OKLAHOMA	33,475	2,811	11	3,366	9
OREGON	21,922	2,376	9	3,209	6
PENNSYLVANIA	506,153	11,785	42	12,365	40
RHODE ISLAND	144,935	935	155	1,033	140
SOUTH CAROLINA	158,419	2,876	55	3,700	42
SOUTH DAKOTA	43,304	689	62	730	59
TENNESSEE	168,914	4,299	39	5,573	30
TEXAS	4,882	12,830	0	18,069	0
UTAH	6,926	1,268	5	1,688	4
VERMONT	44,214	483	91	607	72
VIRGINIA	439,709	5,135	85	6,755	65
WASHINGTON	590,292	3,658	161	4,417	133
WEST VIRGINIA	271,768	1,859	146	2,003	135
WISCONSIN	100,147	4,651	21	5,553	18
WYOMING	49,231	406	121	484	101
AMERICAN SAMOA	22,894	29	789	40	572
GUAM	38,327	93	412	275	139
MARIANAS GROUP	17,330	12	1,444	35	495
PUERTO RICO	336,481	3,282	102	4,700	71
PAC. TR. TERR.	41,862	114	367	170	246
VIRGIN ISLANDS	16,425	95	172	116	141
U.S. TOTALS	15,090,091	219,955	68	270,414	55

FEBRUARY 10, 1979
TABLE 17

1976 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1977 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1978 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY II

	1978 EPA * ASSESSMENT	1977 POPULATION	COSTS PER CAPITA (1977)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	195,159	3,690	52	4,140	47
ALASKA	5,970	407	14	667	8
ARIZONA	9,780	2,296	4	4,149	2
ARKANSAS	171,718	2,144	80	2,970	57
CALIFORNIA	1,979,759	21,896	90	26,786	73
COLORADO	316,222	2,619	120	3,868	81
CONNECTICUT	139,432	3,108	44	3,741	37
DELAWARE	94,300	582	162	841	112
DIST. OF COLUM.	15,406	690	22	661	23
FLORIDA	1,405,881	8,452	166	15,049	93
GEORGIA	541,715	5,048	107	7,053	76
HAWAII	11,072	895	12	1,366	8
IDAHO	98,294	857	114	1,183	83
ILLINOIS	1,293,671	11,245	115	12,358	104
INDIANA	536,394	5,330	100	5,732	93
IOWA	316,140	2,879	109	3,101	101
KANSAS	123,300	2,326	53	2,517	48
KENTUCKY	373,128	3,458	107	4,224	88
LOUISIANA	57,635	3,921	14	4,659	12
MAINE	22,526	1,085	20	1,222	18
MARYLAND	843,219	4,139	203	5,583	151
MASSACHUSETTS	250,974	5,782	43	6,614	37
MICHIGAN	976,265	9,129	106	10,314	94
MINNESOTA	705,707	3,975	177	4,505	156
MISSISSIPPI	260,333	2,389	108	2,740	95
MISSOURI	23,568	4,801	4	5,225	4
MONTANA	6,449	761	8	802	8
NEBRASKA	2,865	1,561	1	1,734	1
NEVADA	121,601	633	192	1,141	106
NEW HAMPSHIRE	95,137	849	112	1,306	72
NEW JERSEY	866,179	7,329	118	8,747	99
NEW MEXICO	20,007	1,190	16	1,436	13
NEW YORK	1,291,248	17,924	72	18,922	68
NORTH CAROLINA	456,230	5,525	82	7,419	61
NORTH DAKOTA	0	653	0	690	0
OHIO	1,656,851	10,701	154	12,031	137
OKLAHOMA	212,681	2,811	75	3,396	62
OREGON	403,604	2,376	169	3,209	125
PENNSYLVANIA	1,132,002	11,785	96	12,365	91
RHODE ISLAND	96,950	935	103	1,033	93
SOUTH CAROLINA	63,623	2,876	22	3,700	17
SOUTH DAKOTA	99,845	689	144	730	136
TENNESSEE	387,644	4,299	90	5,573	69
TEXAS	1,214,984	12,830	94	18,069	67
UTAH	230,362	1,268	181	1,688	136
VERMONT	85,821	483	177	607	141
VIRGINIA	328,809	5,135	64	6,755	48
WASHINGTON	192,335	3,658	52	4,417	43
WEST VIRGINIA	113,257	1,859	60	2,003	56
WISCONSIN	636,622	4,651	136	5,553	114
WYOMING	3,947	406	9	484	8
AMERICAN SAMOA	0	29	0	40	0
GUAM	1,169	93	12	275	4
MARIANAS GROUP	0	12	0	35	0
PUERTO RICO	20,104	3,282	6	4,700	4
PAC. TR. TERR.	0	114	0	170	0
VIRGIN ISLANDS	0	95	0	116	0
U.S. TOTALS	20,507,894	219,955	93	270,414	75

FEBRUARY 10, 1979
TABLE 1H

1978 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1977 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1978 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY III A

	1978 EPA * ASSESSMENT	1977 POPULATION	COSTS PER CAPITA (1977)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	86,639	3,690	23	4,140	20
ALASKA	30,759	407	75	667	46
ARIZONA	1,449	2,296	0	4,149	0
ARKANSAS	29,864	2,144	13	2,970	10
CALIFORNIA	75,234	21,896	3	26,786	2
COLORADO	10,088	2,619	3	3,868	2
CONNECTICUT	31,237	3,108	10	3,741	8
DELAWARE	2,780	582	4	841	3
DIST. OF COLUM.	0	690	0	661	0
FLORIDA	70,964	8,452	8	15,049	4
GEORGIA	78,273	5,048	15	7,053	11
HAWAII	27	895	0	1,366	0
IDAHO	14,628	857	17	1,183	12
ILLINOIS	144,613	11,245	12	12,358	11
INDIANA	36,491	5,330	6	5,732	6
IOWA	80,305	2,879	27	3,101	25
KANSAS	48,115	2,326	20	2,517	19
KENTUCKY	74,180	3,458	21	4,224	17
LOUISIANA	45,845	3,921	11	4,659	9
MAINE	13,573	1,085	12	1,222	11
MARYLAND	7,250	4,139	1	5,583	1
MASSACHUSETTS	3,827	5,782	0	6,614	0
MICHIGAN	43,860	9,129	4	10,314	4
MINNESOTA	28,102	3,975	7	4,505	6
MISSISSIPPI	98,584	2,389	41	2,740	35
MISSOURI	59,834	4,801	12	5,225	11
MONTANA	2,708	761	3	802	3
NEBRASKA	1,071	1,561	0	1,734	0
NEVADA	1,340	633	2	1,141	1
NEW HAMPSHIRE	6,819	849	8	1,306	5
NEW JERSEY	137,654	7,329	18	8,747	15
NEW MEXICO	98	1,190	0	1,436	0
NEW YORK	103,955	17,924	5	18,922	5
NORTH CAROLINA	67,041	5,525	12	7,419	9
NORTH DAKOTA	514	653	0	690	0
OHIO	256,455	10,701	23	12,031	21
OKLAHOMA	36,454	2,811	12	3,396	10
OREGON	51,379	2,376	21	3,209	16
PENNSYLVANIA	10,378	11,785	0	12,365	0
RHODE ISLAND	10,598	935	11	1,033	10
SOUTH CAROLINA	51,984	2,876	18	3,700	14
SOUTH DAKOTA	3,141	689	4	730	4
TENNESSEE	124,660	4,299	28	5,573	22
TEXAS	214,956	12,830	16	18,069	11
UTAH	40,689	1,268	32	1,688	24
VERMONT	2,260	483	4	607	3
VIRGINIA	11,860	5,135	2	6,755	1
WASHINGTON	83,474	3,658	22	4,417	18
WEST VIRGINIA	1,636	1,859	0	2,003	0
WISCONSIN	76,702	4,651	16	5,553	13
WYOMING	7,863	406	19	484	16
AMERICAN SAMOA	0	29	0	40	0
GUAM	596	93	6	275	2
MARIANAS GROUP	0	12	0	35	0
PUERTO RICO	14,531	3,282	4	4,700	3
PAC. TR. TERR.	0	114	0	170	0
VIRGIN ISLANDS	115	95	1	116	0
U.S. TOTALS	2,437,452	219,955	11	270,414	9

FEBRUARY 10, 1979
TABLE 19

1978 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1977 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1978 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY III B

	1978 EPA * ASSESSMENT	1977 POPULATION	COSTS PER CAPITA (1977)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	2,376	3,690	0	4,140	0
ALASKA	84	407	0	667	0
ARIZONA	860	2,296	0	4,149	0
ARKANSAS	2,016	2,144	0	2,970	0
CALIFORNIA	84,100	21,896	3	26,786	3
COLORADO	90,425	2,619	34	3,868	23
CONNECTICUT	18,881	3,108	6	3,741	5
DELAWARE	495	582	0	841	0
DIST. OF COLUM.	0	690	0	661	0
FLORIDA	0	8,452	0	15,049	0
GEORGIA	1,560	5,048	0	7,053	0
HAWAII	0	895	0	1,366	0
IDAHO	315	857	0	1,183	0
ILLINOIS	3,858	11,245	0	12,358	0
INDIANA	15,720	5,330	2	5,732	2
IOWA	208	2,879	0	3,101	0
KANSAS	16,834	2,326	7	2,517	6
KENTUCKY	0	3,458	0	4,224	0
LOUISIANA	12,349	3,921	3	4,659	2
MAINE	14,059	1,085	12	1,222	11
MARYLAND	1,347,912	4,139	325	5,583	241
MASSACHUSETTS	61,937	5,782	10	6,614	9
MICHIGAN	32,685	9,129	3	10,314	3
MINNESOTA	12,493	3,975	3	4,505	2
MISSISSIPPI	0	2,389	0	2,740	0
MISSOURI	7,323	4,801	1	5,225	1
MONTANA	1,479	761	1	802	1
NEBRASKA	0	1,561	0	1,734	0
NEVADA	369	633	0	1,141	0
NEW HAMPSHIRE	16,440	849	19	1,306	12
NEW JERSEY	1,414	7,329	0	8,747	0
NEW MEXICO	1,203	1,190	1	1,436	0
NEW YORK	2,762,267	17,924	154	18,922	145
NORTH CAROLINA	0	5,525	0	7,419	0
NORTH DAKOTA	1,542	653	2	690	2
OHIO	8,031	10,701	0	12,031	0
OKLAHOMA	20,961	2,811	7	3,396	6
OREGON	38,901	2,376	16	3,209	12
PENNSYLVANIA	0	11,785	0	12,365	0
RHODE ISLAND	2,565	935	2	1,033	2
SOUTH CAROLINA	0	2,876	0	3,700	0
SOUTH DAKOTA	1,194	689	1	730	1
TENNESSEE	0	4,299	0	5,573	0
TEXAS	67,524	12,830	5	18,069	3
UTAH	0	1,268	0	1,688	0
VERMONT	10,696	483	22	607	17
VIRGINIA	1,529	5,135	0	6,755	0
WASHINGTON	60,056	3,658	16	4,417	13
WEST VIRGINIA	665	1,859	0	2,003	0
WISCONSIN	143,653	4,651	30	5,553	25
WYOMING	0	406	0	484	0
AMERICAN SAMOA	1,189	29	41	40	29
GUAM	0	93	0	275	0
MARIANAS GROUP	0	12	0	35	0
PUERTO RICO	9,218	3,282	2	4,700	1
PAC. TR. TERR.	0	114	0	170	0
VIRGIN ISLANDS	0	95	0	116	0
U.S. TOTALS	4,877,786	219,955	22	270,414	18

1978 NEEDS SURVEY

FEBRUARY 10, 1979
TABLE 20

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1977 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1978 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY IV A

	1978 EPA * ASSESSMENT	1977 POPULATION	COSTS PER CAPITA (1977)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	331,636	3,690	89	4,140	80
ALASKA	40,968	407	100	667	61
ARIZONA	118,578	2,296	51	4,149	28
ARKANSAS	134,018	2,144	62	2,970	45
CALIFORNIA	1,415,363	21,896	64	26,786	52
COLORADO	28,712	2,619	10	3,868	7
CONNECTICUT	405,113	3,108	130	3,741	106
DELAWARE	41,745	582	71	841	49
DIST. OF COLUM.	0	690	0	661	0
FLORIDA	1,560,561	8,452	184	15,049	103
GEORGIA	378,532	5,048	74	7,053	53
HAWAII	198,066	895	221	1,366	144
IDAHO	112,352	857	131	1,183	94
ILLINOIS	162,896	11,245	14	12,358	13
INDIANA	338,590	5,330	63	5,732	59
IOWA	123,294	2,879	42	3,101	39
KANSAS	121,127	2,326	52	2,517	48
KENTUCKY	575,541	3,458	166	4,224	136
LOUISIANA	320,902	3,921	81	4,659	68
MAINE	220,290	1,085	203	1,222	180
MARYLAND	221,054	4,139	53	5,583	39
MASSACHUSETTS	754,897	5,782	130	6,614	114
MICHIGAN	987,421	9,129	108	10,314	95
MINNESOTA	153,599	3,975	38	4,505	34
MISSISSIPPI	157,989	2,389	66	2,740	57
MISSOURI	228,818	4,801	47	5,225	43
MONTANA	23,787	761	31	802	29
NEBRASKA	32,586	1,561	20	1,734	18
NEVADA	38,204	633	60	1,141	33
NEW HAMPSHIRE	269,549	849	317	1,306	206
NEW JERSEY	655,609	7,329	89	6,747	74
NEW MEXICO	42,709	1,190	35	1,436	29
NEW YORK	2,436,873	17,924	135	18,922	128
NORTH CAROLINA	479,955	5,525	86	7,419	64
NORTH DAKOTA	3,584	653	5	690	5
OHIO	683,618	10,701	63	12,031	56
OKLAHOMA	139,423	2,811	49	3,396	41
OREGON	287,903	2,376	121	3,209	89
PENNSYLVANIA	982,675	11,785	83	12,365	79
RHODE ISLAND	260,744	935	278	1,033	252
SOUTH CAROLINA	314,611	2,876	109	3,700	85
SOUTH DAKOTA	5,701	689	8	730	7
TENNESSEE	512,333	4,299	119	5,573	91
TEXAS	566,882	12,830	44	18,069	31
UTAH	61,460	1,268	48	1,688	36
VERMONT	77,557	483	160	607	127
VIRGINIA	438,912	5,135	85	6,755	64
WASHINGTON	460,554	3,658	125	4,417	104
WEST VIRGINIA	514,779	1,859	276	2,003	257
WISCONSIN	269,375	4,651	57	5,553	48
WYOMING	1,244	406	3	484	2
AMERICAN SAMOA	9,445	29	325	40	236
GUAM	996	93	10	275	3
MARIANAS GROUP	17,992	12	1,499	35	514
PUERTO RICO	257,485	3,282	78	4,700	54
PAC. TR. TERR.	32,783	114	287	170	192
VIRGIN ISLANDS	11,303	95	118	116	97
U.S. TOTALS	19,022,705	219,955	86	270,414	70

FEBRUARY 16, 1979
TABLE 21

1978 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1977 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1978 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY IV B

	1978 EPA * ASSESSMENT	1977 POPULATION	COSTS PER CAPITA (1977)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	180,667	3,690	48	4,140	43
ALASKA	95,171	407	233	667	142
ARIZONA	199,788	2,296	87	4,149	48
ARKANSAS	99,140	2,144	46	2,970	33
CALIFORNIA	1,627,446	21,896	74	26,786	60
COLORADO	266,062	2,619	101	3,868	68
CONNECTICUT	182,421	3,108	58	3,741	48
DELAWARE	120,456	582	206	841	143
DIST. OF COLUM.	0	690	0	661	0
FLORIDA	1,462,342	8,452	173	15,049	97
GEORGIA	410,509	5,048	81	7,053	58
HAWAII	319,745	895	357	1,366	234
IDAHO	84,550	857	98	1,183	71
ILLINOIS	282,361	11,245	25	12,358	22
INDIANA	311,358	5,330	58	5,732	54
IOWA	201,978	2,879	70	3,101	65
KANSAS	289,833	2,326	124	2,517	115
KENTUCKY	385,922	3,458	111	4,224	91
LOUISIANA	294,689	3,921	75	4,654	63
MAINE	154,585	1,085	142	1,222	126
MARYLAND	323,065	4,139	78	5,583	57
MASSACHUSETTS	543,030	5,782	93	6,614	82
MICHIGAN	671,499	9,129	73	10,314	65
MINNESOTA	247,995	3,975	62	4,505	55
MISSISSIPPI	168,982	2,389	70	2,740	61
MISSOURI	678,294	4,801	141	5,225	129
MONTANA	20,353	761	26	802	25
NEBRASKA	50,403	1,561	32	1,734	29
NEVADA	33,423	633	52	1,141	29
NEW HAMPSHIRE	295,824	849	348	1,306	226
NEW JERSEY	601,439	7,329	82	8,747	68
NEW MEXICO	32,651	1,190	27	1,436	22
NEW YORK	1,863,849	17,924	103	18,922	98
NORTH CAROLINA	438,387	5,525	79	7,419	59
NORTH DAKOTA	14,829	653	22	690	21
OHIO	825,198	10,701	77	12,031	68
OKLAHOMA	129,107	2,811	45	3,396	38
OREGON	301,060	2,376	126	3,209	93
PENNSYLVANIA	529,130	11,785	44	12,365	42
RHODE ISLAND	100,636	935	107	1,023	97
SOUTH CAROLINA	251,738	2,876	87	3,700	68
SOUTH DAKOTA	29,799	689	43	730	40
TENNESSEE	365,840	4,299	85	5,573	65
TEXAS	1,002,366	12,830	78	18,069	55
UTAH	57,760	1,268	45	1,688	34
VERMONT	31,260	483	64	607	51
VIRGINIA	515,021	5,135	100	6,755	76
WASHINGTON	481,274	3,658	131	4,417	108
WEST VIRGINIA	189,591	1,859	101	2,003	94
WISCONSIN	301,991	4,651	64	5,553	54
WYOMING	9,645	406	23	484	19
AMERICAN SAMOA	23,790	29	820	40	594
GUAM	3,770	93	40	275	13
MARIANAS GROUP	21,000	12	1,750	35	600
PUERTO RICO	320,027	3,282	97	4,700	68
PAC. TR. TERR.	15,642	114	137	170	92
VIRGIN ISLANDS	16,277	95	171	116	140
U.S. TOTALS	18,474,970	219,955	83	270,414	68

FEBRUARY 10, 1979
TABLE 22

1976 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1977 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1976 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY V

	1978 EPA * ASSESSMENT	1977 POPULATION	COSTS PER CAPITA (1977)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	0	3,690	0	4,140	0
ALASKA	9,165	407	22	667	13
ARIZONA	0	2,296	0	4,149	0
ARKANSAS	0	2,144	0	2,970	0
CALIFORNIA	167,715	21,896	7	26,786	6
COLORADO	661	2,619	0	3,868	0
CONNECTICUT	398,912	3,108	128	3,741	106
DELAWARE	128,951	582	221	841	153
DIST. OF COLUM.	170,671	690	247	661	258
FLORIDA	8,533	8,452	1	15,049	0
GEORGIA	218,732	5,048	43	7,053	31
HAWAII	0	895	0	1,366	0
IDAHO	57,256	867	66	1,183	48
ILLINOIS	2,131,730	11,245	189	12,358	172
INDIANA	2,920,755	5,230	547	5,732	509
IOWA	192,885	2,879	66	3,101	62
KANSAS	209,776	2,326	90	2,517	83
KENTUCKY	592,419	3,458	171	4,224	140
LOUISIANA	0	3,921	0	4,659	0
MAINE	1,092,520	1,085	1,006	1,222	894
MARYLAND	147,131	4,139	35	5,583	26
MASSACHUSETTS	1,036,250	5,742	179	6,614	156
MICHIGAN	1,602,291	9,129	175	10,314	155
MINNESOTA	187,214	3,975	47	4,505	41
MISSISSIPPI	33,286	2,389	13	2,740	12
MISSOURI	757,919	4,801	157	5,225	145
MONTANA	33,236	761	43	802	41
NEBRASKA	70,806	1,561	45	1,734	40
NEVADA	0	633	0	1,141	0
NEW HAMPSHIRE	272,996	849	321	1,306	209
NEW JERSEY	1,009,763	7,329	137	8,747	115
NEW MEXICO	0	1,190	0	1,436	0
NEW YORK	3,384,138	17,924	184	18,922	174
NORTH CAROLINA	67,362	5,525	12	7,419	9
NORTH DAKOTA	13,705	653	20	690	19
OHIO	3,261,614	10,701	304	12,031	271
OKLAHOMA	0	2,811	0	3,396	0
OREGON	431,333	2,376	181	3,209	134
PENNSYLVANIA	2,198,136	11,785	186	12,365	177
RHODE ISLAND	329,342	935	352	1,033	318
SOUTH CAROLINA	0	2,876	0	3,700	0
SOUTH DAKOTA	24,057	699	34	730	32
TENNESSEE	198,462	4,299	46	5,573	35
TEXAS	39,148	12,630	3	18,069	2
UTAH	2,199	1,268	1	1,688	1
VERMONT	208,981	483	432	607	344
VIRGINIA	272,811	5,135	53	6,755	40
WASHINGTON	893,318	3,658	244	4,417	202
WEST VIRGINIA	754,201	1,859	405	2,003	376
WISCONSIN	266,905	4,651	57	5,553	48
WYOMING	3,164	406	7	486	6
AMERICAN SAMOA	0	29	0	40	0
GUAM	0	93	0	275	0
MARIANAS GROUP	0	12	0	35	0
PUERTO RICO	19,360	3,282	5	4,700	4
PAC. TR. TERR.	0	114	0	170	0
VIRGIN ISLANDS	0	95	0	116	0
U.S. TOTALS	25,742,719	219,955	117	270,414	95

FEBRUARY 10, 1979
TABLE 23

1976 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 2000 POPULATION
* THOUSANDS OF 1978 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I THRU V

	1976 EPA * ESTIMATE	1978 EPA * ASSESSMENT	2000 POP.	1976 COSTS PER CAPITA	1978 COSTS PER CAPITA	CHANGE IN PER CAPITA COSTS
ALABAMA	983,473	947,377	4,140	237	228	-9
ALASKA	371,875	515,777	667	557	773	+216
ARIZONA	520,932	512,875	4,149	125	123	-2
ARKANSAS	588,251	501,930	2,970	198	169	-29
CALIFORNIA	6,298,173	8,041,449	26,786	235	300	+65
COLORADO	792,199	948,828	3,988	204	245	+41
CONNECTICUT	1,446,461	1,383,067	3,741	386	369	-17
DELAWARE	306,628	389,310	841	364	462	+98
DIST. OF COLUM.	257,928	186,077	661	390	281	-109
FLORIDA	4,233,437	4,976,527	15,049	281	330	+49
GEORGIA	1,857,934	1,755,995	7,053	263	248	-15
HAWAII	855,026	859,176	1,366	625	628	+3
IDAHO	495,504	446,643	1,183	419	377	-42
ILLINOIS	6,095,555	4,105,836	12,358	493	332	-161
INDIANA	3,594,601	4,205,646	5,732	627	733	+106
IOWA	1,176,748	1,096,588	3,101	379	353	-26
KANSAS	771,395	1,103,188	2,517	306	438	+132
KENTUCKY	1,457,536	2,085,385	4,224	345	493	+148
LOUISIANA	803,267	1,136,873	4,659	172	244	+72
MAINE	1,093,149	1,638,839	1,222	894	1,341	+447
MARYLAND	3,309,029	2,910,164	5,593	592	521	-71
MASSACHUSETTS	3,862,885	3,426,965	6,614	584	518	-66
MICHIGAN	5,831,375	4,485,332	10,314	565	434	-131
MINNESOTA	1,829,455	1,347,694	4,505	406	299	-107
MISSISSIPPI	852,366	774,969	2,740	311	282	-29
MISSOURI	2,942,420	2,535,324	5,225	563	485	-78
MONTANA	144,158	125,986	802	179	157	-22
NEBRASKA	465,497	317,681	1,734	268	183	-85
NEVADA	301,300	260,078	1,141	264	227	-37
NEW HAMPSHIRE	1,183,108	1,154,711	1,306	905	884	-21
NEW JERSEY	3,695,315	4,196,374	6,747	422	479	+57
NEW MEXICO	168,476	158,752	1,436	117	110	-7
NEW YORK	16,488,269	14,156,469	18,922	871	748	-123
NORTH CAROLINA	1,378,404	1,657,975	7,419	185	223	+38
NORTH DAKOTA	83,265	82,352	690	120	119	-1
OHIO	8,170,306	6,777,949	12,031	679	563	-116
OKLAHOMA	587,124	572,101	3,396	172	168	-4
OREGON	1,570,773	1,536,102	3,209	489	478	-11
PENNSYLVANIA	4,324,092	5,358,454	12,365	349	433	+84
RHODE ISLA	821,190	945,772	1,033	794	915	+121
SOUTH CAROL.NA	1,087,405	840,375	3,700	293	227	-66
SOUTH DAKOTA	156,371	207,041	730	214	283	+69
TENNESSEE	1,453,449	1,757,853	5,573	260	315	+55
TEXAS	3,197,223	3,110,742	18,069	176	172	-4
UTAH	307,145	399,396	1,688	181	236	+55
VERMONT	441,731	460,989	607	727	759	+32
VIRGINIA	1,798,570	2,008,651	6,755	266	297	+31
WASHINGT.	2,271,194	2,761,303	4,417	514	625	+111
WEST VIRGINIA	2,481,475	1,845,897	2,003	1,238	921	-317
WISCONSIN	2,245,665	1,797,595	5,553	404	323	-81
WYOMING	76,494	75,094	484	158	155	-3
AMERICAN SAMOA	68,090	57,318	40	1,702	1,432	-270
GUAM	81,338	44,858	275	295	163	-132
MARIANAS GROUP	0	56,322	35	0	1,609	+1,609
PUERTO RICO	1,046,376	977,206	4,700	222	207	-15
PAC. TR. TERR.	170,644	90,287	170	1,003	531	-472
VIRGIN ISLANDS	52,032	44,120	116	448	380	-68
U.S. TOTALS	108,945,224	106,153,617	270,414	402	392	-10

FEBRUARY 10, 1979
TABLE 24

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1978 DOLLARS
CATEGORIES 1 THROUGH V

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE
ALABAMA	947,377	947,377	+0	0.8684	0.8924	+0.0240
ALASKA	515,777	515,777	+0	0.4728	0.4858	+0.0130
ARIZONA	512,875	512,875	+0	0.4701	0.4831	+0.0129
ARKANSAS	501,930	501,930	+0	0.4601	0.4728	+0.0127
CALIFORNIA	9,060,410	8,041,449	-1,018,961	8.3056	7.5752	-0.7303
COLORADO	948,828	948,828	+0	0.8697	0.8938	+0.0240
CONNECTICUT	1,383,067	1,383,067	+0	1.2678	1.3028	+0.0350
DELAWARE	390,496	389,310	-1,176	0.3579	0.3667	+0.0087
DIST. OF COLUM.	186,077	186,077	+0	0.1705	0.1752	+0.0047
FLORIDA	4,976,527	4,976,527	+0	4.5619	4.6880	+0.1260
GEORGIA	1,755,995	1,755,995	+0	1.6097	1.6542	+0.0444
HAWAII	859,176	859,176	+0	0.7876	0.8093	+0.0217
IDAHO	446,643	446,643	+0	0.4094	0.4207	+0.0113
ILLINOIS	4,224,793	4,105,836	-118,957	3.8726	3.8678	-0.0050
INDIANA	4,205,646	4,205,646	+0	3.8552	3.9618	+0.1065
IOWA	1,096,588	1,096,588	+0	1.0052	1.0330	+0.0277
KANSAS	1,103,252	1,103,188	-64	1.0113	1.0392	+0.0278
KENTUCKY	2,085,385	2,085,385	+0	1.9116	1.9644	+0.0528
LOUISIANA	1,136,873	1,136,873	+0	1.0421	1.0709	+0.0288
MAINE	1,638,839	1,638,839	+0	1.5023	1.5438	+0.0415
MARYLAND	3,069,482	2,910,164	-159,318	2.8137	2.7414	-0.0723
MASSACHUSETTS	3,426,945	3,426,945	+0	3.1414	3.2282	+0.0868
MICHIGAN	4,639,749	4,485,332	-154,417	4.2532	4.2253	-0.0279
MINNESOTA	1,351,950	1,347,694	-4,256	1.2393	1.2695	+0.0302
MISSISSIPPI	774,969	774,969	+0	0.7104	0.7300	+0.0196
MISSOURI	2,535,491	2,535,324	-167	2.3242	2.3883	+0.0640
MONTANA	125,986	125,986	+0	0.1154	0.1186	+0.0031
NEBRASKA	317,681	317,681	+0	0.2912	0.2992	+0.0080
NEVADA	282,841	260,078	-22,763	0.2592	0.2450	-0.0142
NEW HAMPSHIRE	1,154,711	1,154,711	+0	1.0585	1.0877	+0.0292
NEW JERSEY	4,196,374	4,196,374	+0	3.8467	3.9531	+0.1063
NEW MEXICO	158,752	158,752	+0	0.1455	0.1495	+0.0040
NEW YORK	15,146,365	14,156,469	-989,896	13.8846	13.3358	-0.5487
NORTH CAROLINA	1,657,975	1,657,975	+0	1.5198	1.5618	+0.0420
NORTH DAKOTA	82,352	82,352	+0	0.0754	0.0775	+0.0020
OHIO	6,777,949	6,777,949	+0	6.2133	6.3850	+0.1717
OKLAHOMA	572,101	572,101	+0	0.5244	0.5389	+0.0144
OREGON	1,536,102	1,536,102	+0	1.4081	1.4470	+0.0389
PENNSYLVANIA	5,391,589	5,358,454	-33,135	4.9424	5.0478	+0.1053
RHODE ISLAND	945,772	945,772	+0	0.8669	0.8909	+0.0239
SOUTH CAROLINA	840,375	840,375	+0	0.7703	0.7916	+0.0212
SOUTH DAKOTA	212,691	207,041	-5,650	0.1949	0.1950	+0.0000
TENNESSEE	1,757,853	1,757,853	+0	1.6114	1.6559	+0.0445
TEXAS	3,110,790	3,110,742	-48	2.8516	2.9304	+0.0787
UTAH	399,396	399,396	+0	0.3661	0.3762	+0.0101
VERMONT	461,772	460,989	-783	0.4233	0.4342	+0.0109
VIRGINIA	2,008,651	2,008,651	+0	1.8413	1.8922	+0.0508
WASHINGTON	2,848,103	2,761,303	-86,800	2.6108	2.6012	-0.0096
WEST VIRGINIA	1,845,767	1,845,897	-870	1.6929	1.7388	+0.0459
WISCONSIN	2,123,819	1,797,595	-326,223	1.9466	1.6933	-0.2535
WYOMING	75,094	75,094	+0	0.0688	0.0707	+0.0019
AMERICAN SAMOA	57,318	57,318	+0	0.0525	0.0539	+0.0014
GUAM	44,858	44,858	+0	0.0411	0.0422	+0.0011
MARIANAS GROUP	56,322	56,322	+0	0.0516	0.0530	+0.0014
PUERTO RICO	987,575	977,206	-10,369	0.9053	0.9205	+0.0152
PAC. TR. TERR.	90,287	90,287	+0	0.0827	0.0850	+0.0022
VIRGIN ISLANDS	44,120	44,120	+0	0.0404	0.0415	+0.0011
U.S. TOTALS	109,087,470	106,153,617	-2,933,853	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 25

1978 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 2000 POPULATION
* THOUSANDS OF 1978 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I THRU V

	STATE * ESTIMATE	EPA * ASSESSMENT	2000 POP.	STATE COSTS PER CAPITA	EPA COSTS PER CAPITA	DIFF. IN PER CAPITA COSTS
ALABAMA	947,377	947,377	4,140	228	228	+0
ALASKA	515,777	515,777	667	773	773	+0
ARIZONA	512,875	512,875	4,149	123	123	+0
ARKANSAS	501,930	501,930	2,970	169	169	+0
CALIFORNIA	9,060,410	8,041,449	26,786	338	300	-38
COLORADO	948,828	948,828	3,868	245	245	+0
CONNECTICUT	1,383,067	1,383,067	3,741	369	369	+0
DELAWARE	390,486	389,310	841	464	462	-2
DIST. OF COLUM.	186,077	186,077	661	281	281	+0
FLORIDA	4,976,527	4,976,527	15,049	330	330	+0
GEORGIA	1,755,995	1,755,995	7,053	248	248	+0
HAWAII	859,176	859,176	1,366	628	628	+0
IDAHO	446,643	446,643	1,183	377	377	+0
ILLINOIS	4,224,793	4,105,836	12,358	341	332	-9
INDIANA	4,205,646	4,205,646	5,732	733	733	+0
IOWA	1,096,588	1,096,588	3,101	353	353	+0
KANSAS	1,103,252	1,103,188	2,517	438	438	+0
KENTUCKY	2,085,385	2,085,385	4,224	493	493	+0
LOUISIANA	1,136,873	1,136,873	4,659	244	244	+0
MAINE	1,638,839	1,638,839	1,222	1,341	1,341	+0
MARYLAND	3,069,482	2,910,164	5,593	549	521	-28
MASSACHUSETTS	3,426,945	3,426,945	6,614	518	518	+0
MICHIGAN	4,639,749	4,485,332	10,314	449	434	-15
MINNESOTA	1,351,950	1,347,694	4,505	300	299	-1
MISSISSIPPI	774,969	774,969	2,740	282	282	+0
MISSOURI	2,535,491	2,535,324	5,225	485	485	+0
MONTANA	125,986	125,986	802	157	157	+0
NEBRASKA	317,681	317,681	1,734	183	183	+0
NEVADA	282,841	280,078	1,141	247	227	-20
NEW HAMPSHIRE	1,154,711	1,154,711	1,306	884	884	+0
NEW JERSEY	4,196,374	4,196,374	8,747	479	479	+0
NEW MEXICO	158,752	158,752	1,436	110	110	+0
NEW YORK	15,146,365	14,156,469	18,922	800	748	-52
NORTH CAROLINA	1,657,975	1,657,975	7,419	223	223	+0
NORTH DAKOTA	82,352	82,352	690	119	119	+0
OHIO	6,777,949	6,777,949	12,031	563	563	+0
OKLAHOMA	572,101	572,101	3,396	168	168	+0
OREGON	1,536,102	1,536,102	3,209	478	478	+0
PENNSYLVANIA	5,391,589	5,358,454	12,365	436	433	-3
RHODE ISLAND	945,772	945,772	1,033	915	915	+0
SOUTH CAROLINA	840,375	840,375	3,700	227	227	+0
SOUTH DAKOTA	212,691	207,041	730	291	283	-8
TENNESSEE	1,757,853	1,757,853	5,573	315	315	+0
TEXAS	3,110,790	3,110,742	18,069	172	172	+0
UTAH	399,396	399,396	1,688	236	236	+0
VERMONT	461,772	460,989	607	760	759	-1
VIRGINIA	2,008,651	2,008,651	6,755	297	297	+0
WASHINGTON	2,848,103	2,761,303	4,417	644	625	-19
WEST VIRGINIA	1,846,767	1,845,897	2,003	922	921	-1
WISCONSIN	2,123,818	1,797,595	5,553	382	323	-59
WYOMING	75,094	75,094	484	155	155	+0
AMERICAN SAMOA	57,318	57,318	40	1,432	1,432	+0
GUAM	44,858	44,858	275	163	163	+0
MARIANAS GROUP	56,322	56,322	35	1,609	1,609	+0
PUERTO RICO	987,575	977,206	4,700	210	207	-3
PAC. TR. TERR.	90,287	90,287	170	531	531	+0
VIRGIN ISLANDS	44,120	44,120	116	380	380	+0
U.S. TOTALS	109,087,470	106,153,617	270,414	403	392	-11

1978 NEEDS SURVEY

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TABLE 26

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1978 DOLLARS
CATEGORIES I AND II

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE
ALABAMA	346,059	346,059	+0	0.9364	0.9721	+0.0357
ALASKA	339,630	339,630	+0	0.9190	0.9540	+0.0350
ARIZONA	192,200	192,200	+0	0.5201	0.5399	+0.0198
ARKANSAS	236,892	236,892	+0	0.6410	0.6654	+0.0244
CALIFORNIA	4,671,591	4,671,591	+0	12.6416	13.1231	+0.4815
COLORADO	552,880	552,880	+0	1.4961	1.5531	+0.0570
CONNECTICUT	346,503	346,503	+0	0.9376	0.9733	+0.0357
DELAWARE	94,873	94,873	+0	0.2567	0.2665	+0.0098
DIST. OF COLUM.	15,406	15,406	+0	0.0416	0.0432	+0.0016
FLORIDA	1,874,127	1,874,127	+0	5.0715	5.2646	+0.1931
GEORGIA	668,389	668,389	+0	1.8087	1.8776	+0.0689
HAWAII	341,336	341,336	+0	0.9236	0.9588	+0.0352
IDAHO	177,542	177,542	+0	0.4804	0.4987	+0.0183
ILLINOIS	1,498,264	1,380,378	-117,886	4.0544	3.8776	-0.1767
INDIANA	582,732	582,732	+0	1.5769	1.6369	+0.0600
IOWA	497,918	497,918	+0	1.3474	1.3987	+0.0513
KANSAS	417,503	417,503	+0	1.1297	1.1728	+0.0431
KENTUCKY	457,323	457,323	+0	1.2375	1.2846	+0.0471
LOUISIANA	463,088	463,088	+0	1.2531	1.3008	+0.0477
MAINE	143,812	143,812	+0	0.3891	0.4039	+0.0148
MARYLAND	948,218	863,742	-84,476	2.5659	2.4263	-0.1395
MASSACHUSETTS	1,027,054	1,027,054	+0	2.7792	2.8851	+0.1059
MICHIGAN	1,216,582	1,147,576	-69,006	3.2921	3.2237	-0.0683
MINNESOTA	722,547	718,291	-4,256	1.9552	2.0177	+0.0625
MISSISSIPPI	316,128	316,128	+0	0.8554	0.8880	+0.0326
MISSOURI	803,144	803,136	-8	2.1733	2.2561	+0.0828
MONTANA	44,423	44,423	+0	0.1202	0.1247	+0.0045
NEBRASKA	162,813	162,813	+0	0.4405	0.4573	+0.0168
NEVADA	198,376	186,742	-11,634	0.5368	0.5245	-0.0122
NEW HAMPSHIRE	293,083	293,083	+0	0.7931	0.8233	+0.0302
NEW JERSEY	1,790,495	1,790,495	+0	4.8452	5.0297	+0.1845
NEW MEXICO	82,091	82,091	+0	0.2221	0.2306	+0.0085
NEW YORK	4,457,591	3,684,387	-773,204	12.0625	10.3499	-1.7125
NORTH CAROLINA	605,250	605,250	+0	1.6378	1.7002	+0.0624
NORTH DAKOTA	48,178	48,178	+0	0.1303	0.1353	+0.0050
OHIO	1,743,033	1,743,033	+0	4.7167	4.8964	+0.1797
OKLAHOMA	246,156	246,156	+0	0.6661	0.6914	+0.0253
OREGON	425,526	425,526	+0	1.1515	1.1953	+0.0438
PENNSYLVANIA	1,665,791	1,638,165	-27,626	4.5077	4.6018	+0.0941
RHODE ISLAND	241,885	241,885	+0	0.6545	0.6794	+0.0249
SOUTH CAROLINA	222,042	222,042	+0	0.6008	0.6237	+0.0229
SOUTH DAKOTA	144,324	143,149	-1,175	0.3905	0.4021	+0.0116
TENNESSEE	556,558	556,558	+0	1.5060	1.5634	+0.0574
TEXAS	1,219,866	1,219,866	+0	3.3010	3.4267	+0.1257
UTAH	237,288	237,288	+0	0.6421	0.6665	+0.0244
VERMONT	130,818	130,035	-783	0.3540	0.3652	+0.0112
VIRGINIA	768,518	768,518	+0	2.0796	2.1588	+0.0792
WASHINGTON	782,627	782,627	+0	2.1178	2.1985	+0.0807
WEST VIRGINIA	385,240	385,025	-215	1.0424	1.0815	+0.0391
WISCONSIN	999,134	736,769	-262,365	2.7037	2.0696	-0.6340
WYOMING	53,178	53,178	+0	0.1439	0.1493	+0.0054
AMERICAN SAMOA	22,894	22,894	+0	0.0619	0.0643	+0.0024
GUAM	39,496	39,496	+0	0.1068	0.1109	+0.0041
MARIANAS GROUP	17,330	17,330	+0	0.0468	0.0486	+0.0018
PUERTO RICO	359,843	356,585	-3,258	0.9737	1.0016	+0.0279
PAC. TR. TERR.	41,862	41,862	+0	0.1132	0.1175	+0.0043
VIRGIN ISLANDS	16,425	16,425	+0	0.0444	0.0461	+0.0017
U.S. TOTALS	36,953,977	35,597,985	-1,355,892	100.0000	100.0000	+0.0000

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TABLE 27

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1978 DOLLARS
CATEGORIES I, II AND IV B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE
ALABAMA	526,726	526,726	+0	0.9467	0.9741	+0.0274
ALASKA	434,801	434,801	+0	0.7814	0.8041	+0.0227
ARIZONA	391,988	391,988	+0	0.7045	0.7249	+0.0204
ARKANSAS	336,032	336,032	+0	0.6039	0.6214	+0.0175
CALIFORNIA	6,299,037	6,299,037	+0	11.3216	11.6491	+0.3275
COLORADO	818,942	818,942	+0	1.4719	1.5145	+0.0426
CONNECTICUT	528,924	528,924	+0	0.9506	0.9781	+0.0275
DELAWARE	216,505	215,329	-1,176	0.3891	0.3982	+0.0091
DIST. OF COLUM.	15,406	15,406	+0	0.0276	0.0284	+0.0008
FLORIDA	3,336,469	3,336,469	+0	5.9966	6.1703	+0.1735
GEORGIA	1,078,898	1,078,898	+0	1.9391	1.9952	+0.0561
HAWAII	661,083	661,083	+0	1.1882	1.2225	+0.0343
IDAHO	262,092	262,092	+0	0.4710	0.4847	+0.0137
ILLINOIS	1,781,696	1,662,739	-118,957	3.2023	3.0749	-0.1273
INDIANA	894,090	894,090	+0	1.6070	1.6534	+0.0464
IOWA	699,896	699,896	+0	1.2579	1.2943	+0.0364
KANSAS	707,336	707,336	+0	1.2713	1.3081	+0.0368
KENTUCKY	843,245	843,245	+0	1.5156	1.5594	+0.0438
LOUISIANA	757,777	757,777	+0	1.3620	1.4013	+0.0393
MAINE	298,397	298,397	+0	0.5363	0.5518	+0.0155
MARYLAND	1,343,552	1,186,807	-156,745	2.4148	2.1948	-0.2199
MASSACHUSETTS	1,570,084	1,570,084	+0	2.8220	2.9036	+0.0816
MICHIGAN	1,892,828	1,819,075	-73,753	3.4020	3.3641	-0.0378
MINNESOTA	970,542	966,286	-4,256	1.7444	1.7870	+0.0426
MISSISSIPPI	485,110	485,110	+0	0.8719	0.8971	+0.0252
MISSOURI	1,481,438	1,481,430	-8	2.6626	2.7396	+0.0770
MONTANA	64,776	64,776	+0	0.1164	0.1197	+0.0033
NEBRASKA	213,216	213,216	+0	0.3832	0.3943	+0.0111
NEVADA	242,928	220,165	-22,763	0.4366	0.4071	-0.0294
NEW HAMPSHIRE	588,907	568,907	+0	1.0584	1.0890	+0.0306
NEW JERSEY	2,391,934	2,391,934	+0	4.2991	4.4235	+0.1244
NEW MEXICO	114,742	114,742	+0	0.2062	0.2121	+0.0059
NEW YORK	6,394,502	5,548,236	-846,266	11.4932	10.2606	-1.2325
NORTH CAROLINA	1,043,637	1,043,637	+0	1.8757	1.9300	+0.0543
NORTH DAKOTA	63,007	63,007	+0	0.1132	0.1165	+0.0033
OHIO	2,568,231	2,568,231	+0	4.6160	4.7495	+0.1335
OKLAHOMA	375,263	375,263	+0	0.6744	0.6939	+0.0195
OREGON	726,586	726,586	+0	1.3059	1.3437	+0.0378
PENNSYLVANIA	2,198,076	2,167,295	-30,781	3.9507	4.0080	+0.0573
RHODE ISLAND	342,523	342,523	+0	0.6156	0.6334	+0.0178
SOUTH CAROLINA	473,780	473,780	+0	0.8515	0.8761	+0.0246
SOUTH DAKOTA	175,620	172,948	-2,672	0.3156	0.3198	+0.0042
TENNESSEE	922,398	922,398	+0	1.6578	1.7058	+0.0480
TEXAS	2,222,280	2,222,232	-48	3.9942	4.1096	+0.1154
UTAH	295,048	295,048	+0	0.5303	0.5456	+0.0153
VERMONT	162,078	161,295	-783	0.2913	0.2982	+0.0069
VIRGINIA	1,283,539	1,283,539	+0	2.3069	2.3737	+0.0668
WASHINGTON	1,263,901	1,263,901	+0	2.2716	2.3373	+0.0657
WEST VIRGINIA	574,831	574,616	-215	1.0331	1.0626	+0.0295
WISCONSIN	1,334,411	1,038,766	-295,651	2.3984	1.9210	-0.4773
WYOMING	62,823	62,823	+0	0.1129	0.1161	+0.0032
AMERICAN SAMOA	46,684	46,684	+0	0.0839	0.0863	+0.0024
GUAM	43,266	43,266	+0	0.0777	0.0800	+0.0023
MARIANAS GROUP	38,330	38,330	+0	0.0688	0.0708	+0.0020
PUERTO RICO	686,651	676,612	-10,039	1.2341	1.2512	+0.0171
PAC. TR. TERR.	57,504	57,504	+0	0.1033	0.1063	+0.0030
VIRGIN ISLANDS	32,702	32,702	+0	0.0587	0.0604	+0.0017
U.S. TOTALS	55,637,058	54,072,955	-1,564,113	100.0000	100.0000	+0.0000

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TABLE 28

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR IMPROVEMENT OF TREATMENT PLANTS TO ACHIEVE SECONDARY LEVEL
THOUSANDS OF 1978 DOLLARS
CATEGORY I

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE
ALABAMA	150,900	150,900	+0	0.9944	0.9944	-0.0055
ALASKA	333,660	333,660	+0	2.1988	2.1988	-0.0122
ARIZONA	182,420	182,420	+0	1.2021	1.2021	-0.0067
ARKANSAS	65,174	65,174	+0	0.4294	0.4294	-0.0023
CALIFORNIA	2,691,832	2,691,832	+0	17.7393	17.7393	-0.0990
COLORADO	236,658	236,658	+0	1.5595	1.5595	-0.0087
CONNECTICUT	207,071	207,071	+0	1.3646	1.3646	-0.0076
DELAWARE	573	573	+0	0.0037	0.0037	+0.0000
DIST. OF COLUM.	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	468,246	468,246	+0	3.0857	3.0857	-0.0172
GEORGIA	126,674	126,674	+0	0.8347	0.8347	-0.0046
HAWAII	330,256	330,266	+0	2.1764	2.1764	-0.0121
IDAHO	79,248	79,248	+0	0.5222	0.5222	-0.0029
ILLINOIS	86,707	86,707	+0	0.5713	0.5713	-0.0031
INDIANA	46,338	46,338	+0	0.3053	0.3053	-0.0016
IOWA	181,778	181,778	+0	1.1979	1.1979	-0.0066
KANSAS	294,203	294,203	+0	1.9388	1.9388	-0.0108
KENTUCKY	84,195	84,195	+0	0.5548	0.5548	-0.0030
LOUISIANA	405,453	405,453	+0	2.6719	2.6719	-0.0149
MAINE	121,286	121,286	+0	0.7992	0.7992	-0.0044
MARYLAND	21,638	20,523	-1,115	0.1425	0.1425	+0.0065
MASSACHUSETTS	776,080	776,080	+0	5.1144	5.1144	-0.0285
MICHIGAN	173,310	171,311	-1,999	1.1421	1.1421	+0.0068
MINNESOTA	16,840	12,584	-4,256	0.1109	0.1109	+0.0275
MISSISSIPPI	55,795	55,795	+0	0.3676	0.3676	-0.0020
MISSOURI	779,576	779,568	-8	5.1374	5.1374	-0.0286
MONTANA	37,974	37,974	+0	0.2502	0.2502	-0.0013
NEBRASKA	159,948	159,948	+0	1.0540	1.0540	-0.0058
NEVADA	76,775	65,141	-11,634	0.5059	0.5059	+0.0742
NEW HAMPSHIRE	197,946	197,946	+0	1.3044	1.3044	-0.0072
NEW JERSEY	924,316	924,316	+0	6.0913	6.0913	-0.0339
NEW MEXICO	62,084	62,084	+0	0.4091	0.4091	-0.0022
NEW YORK	2,432,842	2,393,139	-39,733	16.0326	16.0326	+0.1736
NORTH CAROLINA	149,020	149,020	+0	0.9820	0.9820	-0.0054
NORTH DAKOTA	48,178	48,178	+0	0.3174	0.3174	-0.0017
OHIO	86,182	86,182	+0	0.5679	0.5679	-0.0031
OKLAHOMA	33,475	33,475	+0	0.2205	0.2205	-0.0012
OREGON	21,922	21,922	+0	0.1444	0.1444	-0.0008
PENNSYLVANIA	528,203	506,163	-22,040	3.4808	3.4808	+0.1266
RHODE ISLAND	144,935	144,935	+0	0.9551	0.9551	-0.0053
SOUTH CAROLINA	158,419	158,419	+0	1.0439	1.0439	-0.0058
SOUTH DAKOTA	44,479	43,304	-1,175	0.2931	0.2931	+0.0061
TENNESSEE	168,914	168,914	+0	1.1131	1.1131	-0.0062
TEXAS	4,882	4,882	+0	0.0321	0.0321	-0.0001
UTAH	6,926	6,926	+0	0.0456	0.0456	-0.0002
VERMONT	44,214	44,214	+0	0.2913	0.2913	-0.0016
VIRGINIA	439,709	439,709	+0	2.8977	2.8977	-0.0161
WASHINGTON	590,292	590,292	+0	3.8900	3.8900	-0.0217
WEST VIRGINIA	271,983	271,768	-215	1.7923	1.7923	-0.0085
WISCONSIN	98,972	100,147	+1,175	0.6522	0.6522	-0.0114
WYOMING	49,231	49,231	+0	0.3244	0.3244	-0.0018
AMERICAN SAMOA	22,894	22,894	+0	0.1508	0.1508	-0.0008
GUAM	38,327	38,327	+0	0.2525	0.2525	-0.0014
MARIANAS GROUP	17,330	17,330	+0	0.1141	0.1141	-0.0006
PUERTO RICO	339,739	336,481	-3,258	2.2388	2.2388	+0.0090
PAC. TR. TERR.	41,862	41,862	+0	0.2758	0.2758	-0.0015
VIRGIN ISLANDS	16,425	16,425	+0	0.1082	0.1082	-0.0005
U.S. TOTALS	15,174,319	15,090,091	-84,228	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 24

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
REPORTED TO ACHIEVE MORE STRINGENT TREATEMENT LEVELS
THOUSANDS OF 1978 DOLLARS
CATEGORY II

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE
ALABAMA	195,159	195,159	+0	0.8960	0.9516	+0.0556
ALASKA	5,970	5,970	+0	0.0274	0.0291	+0.0017
ARIZONA	9,780	9,780	+0	0.0449	0.0476	+0.0027
ARKANSAS	171,718	171,718	+0	0.7884	0.8373	+0.0489
CALIFORNIA	1,979,759	1,979,759	+0	9.0899	9.6536	+0.5637
COLORADO	316,222	316,222	+0	1.4519	1.5419	+0.0900
CONNECTICUT	139,432	139,432	+0	0.6401	0.6798	+0.0397
DELAWARE	94,300	94,300	+0	0.4329	0.4598	+0.0269
DIST. OF COLUM.	15,406	15,406	+0	0.0707	0.0751	+0.0044
FLORIDA	1,405,881	1,405,881	+0	6.4550	6.8553	+0.4003
GEORGIA	541,715	541,715	+0	2.4872	2.6414	+0.1542
HAWAII	11,072	11,072	+0	0.0508	0.0539	+0.0031
IDAHO	98,294	98,294	+0	0.4513	0.4792	+0.0279
ILLINOIS	1,411,557	1,293,671	-117,886	6.4811	6.3081	-0.1729
INDIANA	536,394	536,394	+0	2.4628	2.6155	+0.1527
IOWA	316,140	316,140	+0	1.4515	1.5415	+0.0900
KANSAS	123,300	123,300	+0	0.5661	0.6012	+0.0351
KENTUCKY	373,128	373,128	+0	1.7132	1.8194	+0.1062
LOUISIANA	57,635	57,635	+0	0.2646	0.2810	+0.0164
MAINE	22,526	22,526	+0	0.1034	0.1098	+0.0064
MARYLAND	926,580	843,219	-83,361	4.2543	4.1116	-0.1426
MASSACHUSETTS	250,974	250,974	+0	1.1523	1.2237	+0.0714
MICHIGAN	1,043,272	976,265	-67,007	4.7901	4.7604	-0.0296
MINNESOTA	705,707	705,707	+0	3.2402	3.4411	+0.2009
MISSISSIPPI	260,333	260,333	+0	1.1953	1.2694	+0.0741
MISSOURI	23,568	23,568	+0	0.1082	0.1149	+0.0067
MONTANA	6,449	6,449	+0	0.0296	0.0314	+0.0018
NEBRASKA	2,865	2,865	+0	0.0131	0.0139	+0.0008
NEVADA	121,601	121,601	+0	0.5583	0.5929	+0.0346
NEW HAMPSHIRE	95,137	95,137	+0	0.4368	0.4638	+0.0270
NEW JERSEY	866,179	866,179	+0	3.9770	4.2236	+0.2466
NEW MEXICO	20,007	20,007	+0	0.0918	0.0975	+0.0057
NEW YORK	2,024,749	1,291,248	-733,501	9.2965	6.2963	-3.0001
NORTH CAROLINA	456,230	456,230	+0	2.0947	2.2246	+0.1299
NORTH DAKOTA	0	0	+0	0.0000	0.0000	+0.0000
OHIO	1,656,851	1,656,851	+0	7.6073	8.0790	+0.4717
OKLAHOMA	212,681	212,681	+0	0.9765	1.0370	+0.0605
OREGON	403,604	403,604	+0	1.8531	1.9680	+0.1149
PENNSYLVANIA	1,137,588	1,132,002	-5,586	5.2231	5.5198	+0.2967
RHODE ISLAND	96,950	96,950	+0	0.4451	0.4727	+0.0276
SOUTH CAROLINA	63,623	63,623	+0	0.2921	0.3102	+0.0181
SOUTH DAKOTA	99,845	99,845	+0	0.4584	0.4868	+0.0284
TENNESSEE	387,644	387,644	+0	1.7798	1.8902	+0.1104
TEXAS	1,214,984	1,214,984	+0	5.5785	5.9244	+0.3459
UTAH	230,362	230,362	+0	1.0576	1.1232	+0.0656
VERMONT	86,604	85,821	-783	0.3976	0.4184	+0.0208
VIRGINIA	328,809	328,809	+0	1.5097	1.6033	+0.0936
WASHINGTON	192,335	192,335	+0	0.8830	0.9378	+0.0548
WEST VIRGINIA	113,257	113,257	+0	0.5200	0.5522	+0.0322
WISCONSIN	900,162	636,622	-263,540	4.1330	3.1042	-1.0287
WYOMING	3,947	3,947	+0	0.0181	0.0192	+0.0011
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	1,169	1,169	+0	0.0053	0.0056	+0.0003
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	20,104	20,104	+0	0.0923	0.0980	+0.0057
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	21,779,558	20,507,894	-1,271,664	100.0000	100.0000	+0.0000

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TABLE 30

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CORRECTION OF INFILTRATION/INFLOW CONDITIONS
THOUSANDS OF 1978 DOLLARS
CATEGORY III A

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE
ALABAMA	86,639	86,639	+0	3.3877	3.5544	+0.1667
ALASKA	30,759	30,759	+0	1.2027	1.2619	+0.0592
ARIZONA	1,449	1,449	+0	0.0566	0.0594	+0.0028
ARKANSAS	29,864	29,864	+0	1.1677	1.2252	+0.0575
CALIFORNIA	75,234	75,234	+0	2.9418	3.0865	+0.1447
COLORADO	10,098	10,098	+0	0.3946	0.4139	+0.0194
CONNECTICUT	31,237	31,237	+0	1.2214	1.2815	+0.0601
DELAWARE	2,780	2,780	+0	0.1087	0.1140	+0.0053
DIST. OF COLUM.	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	70,964	70,964	+0	2.7748	2.9113	+0.1365
GEORGIA	78,273	78,273	+0	3.0606	3.2112	+0.1506
HAWAII	27	27	+0	0.0010	0.0010	+0.0000
IDAHO	14,628	14,628	+0	0.5719	0.6001	+0.0282
ILLINOIS	144,613	144,613	+0	5.6547	5.9329	+0.2782
INDIANA	36,491	36,491	+0	1.4268	1.4970	+0.0702
IOWA	80,309	80,309	+0	3.1401	3.2946	+0.1545
KANSAS	48,179	48,115	-64	1.8839	1.9739	+0.0900
KENTUCKY	74,180	74,180	+0	2.9006	3.0433	+0.1427
LOUISIANA	45,845	45,845	+0	1.7926	1.8808	+0.0882
MAINE	13,573	13,573	+0	0.5307	0.5568	+0.0261
MARYLAND	7,250	7,250	+0	0.2834	0.2974	+0.0140
MASSACHUSETTS	3,827	3,827	+0	0.1496	0.1569	+0.0073
MICHIGAN	69,726	43,866	-25,856	2.7264	1.7994	-0.9269
MINNESOTA	28,102	28,102	+0	1.0988	1.1529	+0.0541
MISSISSIPPI	98,584	98,584	+0	3.8548	4.0445	+0.1897
MISSOURI	59,834	59,834	+0	2.3396	2.4547	+0.1151
MONTANA	2,708	2,708	+0	0.1058	0.1110	+0.0052
NEBRASKA	1,071	1,071	+0	0.0418	0.0439	+0.0021
NEVADA	1,340	1,340	+0	0.0523	0.0549	+0.0026
NEW HAMPSHIRE	6,819	6,819	+0	0.2666	0.2797	+0.0131
NEW JERSEY	137,654	137,654	+0	5.3825	5.6474	+0.2649
NEW MEXICO	98	98	+0	0.0038	0.0040	+0.0002
NEW YORK	108,453	103,955	-4,498	4.2407	4.2648	+0.0241
NORTH CAROLINA	67,041	67,041	+0	2.6214	2.7504	+0.1290
NORTH DAKOTA	514	514	+0	0.0200	0.0210	+0.0010
OHIO	256,455	256,455	+0	10.0279	10.5214	+0.4935
OKLAHOMA	36,454	36,454	+0	1.4254	1.4955	+0.0701
OREGON	51,379	51,379	+0	2.0090	2.1078	+0.0988
PENNSYLVANIA	10,378	10,378	+0	0.4058	0.4257	+0.0199
RHODE ISLAND	10,598	10,598	+0	0.4144	0.4347	+0.0203
SOUTH CAROLINA	51,994	51,984	+0	2.0326	2.1327	+0.1001
SOUTH DAKOTA	3,141	3,141	+0	0.1228	0.1288	+0.0060
TENNESSEE	124,660	124,660	+0	4.8744	5.1143	+0.2399
TEXAS	214,956	214,956	+0	8.4052	8.8188	+0.4136
UTAH	40,689	40,689	+0	1.5910	1.6693	+0.0783
VERMONT	2,260	2,260	+0	0.0883	0.0927	+0.0044
VIRGINIA	11,860	11,860	+0	0.4637	0.4865	+0.0228
WASHINGTON	170,274	83,474	-86,800	6.6581	3.4246	-3.2334
WEST VIRGINIA	2,291	1,636	-655	0.0895	0.0671	-0.0223
WISCONSIN	78,758	76,702	-2,056	3.0796	3.1468	+0.0672
WYOMING	7,863	7,963	+0	0.3074	0.3225	+0.0151
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	596	596	+0	0.0233	0.0244	+0.0011
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	14,531	14,531	+0	0.5681	0.5961	+0.0280
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	115	115	+0	0.0044	0.0047	+0.0003
U.S. TOTALS	2,557,391	2,437,452	-119,939	100.0000	100.0000	+0.0000

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TABLE 31

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CORRECTION OF MAJOR REHABILITATION AND REPLACEMENT
THOUSANDS OF 1978 DOLLARS
CATEGORY III B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE
ALABAMA	2,376	2,376	+0	0.0480	0.0487	+0.0007
ALASKA	84	84	+0	0.0016	0.0017	+0.0001
ARIZONA	860	860	+0	0.0174	0.0176	+0.0002
ARKANSAS	2,016	2,016	+0	0.0407	0.0413	+0.0006
CALIFORNIA	84,100	84,100	+0	1.7017	1.7241	+0.0224
COLORADO	90,425	90,425	+0	1.8297	1.8538	+0.0241
CONNECTICUT	18,881	18,881	+0	0.3820	0.3870	+0.0050
DELAWARE	495	495	+0	0.0100	0.0101	+0.0001
DIST. OF COLUM.	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	0	0	+0	0.0000	0.0000	+0.0000
GEORGIA	1,560	1,560	+0	0.0315	0.0319	+0.0004
HAWAII	0	0	+0	0.0000	0.0000	+0.0000
IDAHO	315	315	+0	0.0063	0.0064	+0.0001
ILLINOIS	3,858	3,858	+0	0.0780	0.0790	+0.0010
INDIANA	15,720	15,720	+0	0.3180	0.3222	+0.0042
IOWA	208	208	+0	0.0042	0.0042	+0.0000
KANSAS	16,834	16,834	+0	0.3406	0.3451	+0.0045
KENTUCKY	0	0	+0	0.0000	0.0000	+0.0000
LOUISIANA	12,349	12,349	+0	0.2498	0.2531	+0.0033
MAINE	14,059	14,059	+0	0.2844	0.2882	+0.0038
MARYLAND	1,347,912	1,347,912	+0	27.2751	27.6336	+0.3585
MASSACHUSETTS	61,937	61,937	+0	1.2533	1.2697	+0.0164
MICHIGAN	81,022	32,685	-48,337	1.6394	0.6700	-0.9693
MINNESOTA	12,493	12,493	+0	0.2527	0.2561	+0.0034
MISSISSIPPI	0	0	+0	0.0000	0.0000	+0.0000
MISSOURI	7,323	7,323	+0	0.1481	0.1501	+0.0020
MONTANA	1,479	1,479	+0	0.0299	0.0303	+0.0004
NEBRASKA	0	0	+0	0.0000	0.0000	+0.0000
NEVADA	369	369	+0	0.0074	0.0075	+0.0001
NEW HAMPSHIRE	16,440	16,440	+0	0.3326	0.3370	+0.0044
NEW JERSEY	1,414	1,414	+0	0.0286	0.0289	+0.0003
NEW MEXICO	1,203	1,203	+0	0.0243	0.0246	+0.0003
NEW YORK	2,762,267	2,762,267	+0	55.8947	56.6295	+0.7348
NORTH CAROLINA	0	0	+0	0.0000	0.0000	+0.0000
NORTH DAKOTA	1,542	1,542	+0	0.0312	0.0316	+0.0004
OHIO	8,031	8,031	+0	0.1625	0.1646	+0.0021
OKLAHOMA	20,961	20,961	+0	0.4241	0.4297	+0.0056
OREGON	38,901	38,901	+0	0.7871	0.7975	+0.0104
PENNSYLVANIA	0	0	+0	0.0000	0.0000	+0.0000
RHODE ISLAND	2,565	2,565	+0	0.0519	0.0525	+0.0006
SOUTH CAROLINA	0	0	+0	0.0000	0.0000	+0.0000
SOUTH DAKOTA	1,194	1,194	+0	0.0241	0.0244	+0.0003
TENNESSEE	0	0	+0	0.0000	0.0000	+0.0000
TEXAS	67,524	67,524	+0	1.3663	1.3843	+0.0180
UTAH	0	0	+0	0.0000	0.0000	+0.0000
VERMONT	10,896	10,896	+0	0.2204	0.2233	+0.0029
VIRGINIA	1,529	1,529	+0	0.0309	0.0313	+0.0004
WASHINGTON	60,056	60,056	+0	1.2152	1.2312	+0.0160
WEST VIRGINIA	665	665	+0	0.0134	0.0136	+0.0002
WISCONSIN	159,638	143,853	-15,785	3.2302	2.9491	-0.2810
WYOMING	0	0	+0	0.0000	0.0000	+0.0000
AMERICAN SAMOA	1,189	1,189	+0	0.0240	0.0243	+0.0003
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	9,218	9,218	+0	0.1865	0.1889	+0.0024
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	4,941,908	4,877,786	-64,122	100.0000	100.0000	+0.0000

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TABLE 32

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1976 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF ELIGIBLE NEW COLLECTORS AND APPURTENANCES
THOUSANDS OF 1978 DOLLARS
CATEGORY IV A

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE
ALABAMA	331,636	331,636	+0	1.7282	1.7433	+0.0151
ALASKA	40,968	40,968	+0	0.2134	0.2153	+0.0018
ARIZONA	118,578	118,578	+0	0.6179	0.6233	+0.0054
ARKANSAS	134,018	134,018	+0	0.6983	0.7045	+0.0061
CALIFORNIA	1,415,363	1,415,363	+0	7.3757	7.4403	+0.0646
COLORADO	28,712	28,712	+0	0.1496	0.1509	+0.0013
CONNECTICUT	405,113	405,113	+0	2.1111	2.1296	+0.0184
DELAWARE	41,745	41,745	+0	0.2175	0.2194	+0.0018
DIST. OF COLUM.	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	1,560,561	1,560,561	+0	8.1323	8.2036	+0.0712
GEORGIA	378,532	378,532	+0	1.9725	1.9898	+0.0172
HAWAII	198,066	198,066	+0	1.0321	1.0411	+0.0090
IDAHO	112,352	112,352	+0	0.5854	0.5906	+0.0051
ILLINOIS	162,896	162,896	+0	0.8488	0.8563	+0.0074
INDIANA	338,590	338,590	+0	1.7644	1.7799	+0.0154
IOWA	123,294	123,294	+0	0.6425	0.6481	+0.0056
KANSAS	121,127	121,127	+0	0.6312	0.6367	+0.0055
KENTUCKY	575,541	575,541	+0	2.9992	3.0255	+0.0262
LOUISIANA	320,902	320,902	+0	1.6722	1.6869	+0.0146
MAINE	220,290	220,290	+0	1.1479	1.1580	+0.0100
MARYLAND	223,637	221,064	-2,573	1.1654	1.1620	-0.0033
MASSACHUSETTS	754,897	754,897	+0	3.9339	3.9683	+0.0344
MICHIGAN	993,882	987,421	-6,461	5.1793	5.1907	+0.0114
MINNESOTA	153,599	153,599	+0	0.8004	0.8074	+0.0070
MISSISSIPPI	157,989	157,989	+0	0.8233	0.8305	+0.0072
MISSOURI	228,977	228,818	-159	1.1932	1.2028	+0.0096
MONTANA	23,787	23,787	+0	0.1239	0.1250	+0.0010
NEBRASKA	32,588	32,588	+0	0.1698	0.1713	+0.0014
NEVADA	38,204	38,204	+0	0.1990	0.2008	+0.0017
NEW HAMPSHIRE	269,549	269,549	+0	1.4046	1.4169	+0.0123
NEW JERSEY	655,609	655,609	+0	3.4165	3.4464	+0.0299
NEW MEXICO	42,709	42,709	+0	0.2225	0.2245	+0.0019
NEW YORK	2,576,005	2,436,873	-139,132	13.4240	12.8103	-0.6137
NORTH CAROLINA	479,955	479,955	+0	2.5011	2.5230	+0.0219
NORTH DAKOTA	3,584	3,584	+0	0.0186	0.0188	+0.0001
OHIO	683,618	683,618	+0	3.5624	3.5936	+0.0312
OKLAHOMA	139,423	139,423	+0	0.7265	0.7329	+0.0063
OREGON	287,903	287,903	+0	1.5003	1.5134	+0.0131
PENNSYLVANIA	985,029	982,675	-2,354	5.1331	5.1657	+0.0326
RHODE ISLAND	260,744	260,744	+0	1.3587	1.3706	+0.0118
SOUTH CAROLINA	314,611	314,611	+0	1.6394	1.6538	+0.0143
SOUTH DAKOTA	8,679	5,701	-2,978	0.0452	0.0299	-0.0152
TENNESSEE	512,333	512,333	+0	2.6698	2.6932	+0.0233
TEXAS	566,882	566,882	+0	2.9541	2.9800	+0.0258
UTAH	61,460	61,460	+0	0.3202	0.3230	+0.0027
VERMONT	77,557	77,557	+0	0.4041	0.4076	+0.0035
VIRGINIA	438,912	438,912	+0	2.2872	2.3072	+0.0200
WASHINGTON	460,554	460,554	+0	2.4000	2.4210	+0.0210
WEST VIRGINIA	514,779	514,779	+0	2.6826	2.7061	+0.0235
WISCONSIN	282,136	269,375	-12,731	1.4701	1.4160	-0.0540
WYOMING	1,244	1,244	+0	0.0064	0.0065	+0.0000
AMERICAN SAMOA	9,445	9,445	+0	0.0492	0.0496	+0.0004
GUAM	996	996	+0	0.0051	0.0052	+0.0000
MARIANAS GROUP	17,992	17,992	+0	0.0937	0.0945	+0.0008
PUERTO RICO	257,815	257,485	-330	1.3435	1.3535	+0.0100
PAC. TR. TERR.	32,783	32,783	+0	0.1708	0.1723	+0.0014
VIRGIN ISLANDS	11,303	11,303	+0	0.0588	0.0594	+0.0005
U.S. TOTALS	19,189,423	19,022,705	-166,718	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 33

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF NEW INTERCEPTORS AND APPURTENANCES
THOUSANDS OF 1978 DOLLARS
CATEGORY IV B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE
ALABAMA	180,667	180,667	+0	0.9670	0.9778	+0.0108
ALASKA	95,171	95,171	+0	0.5093	0.5151	+0.0058
ARIZONA	199,788	199,788	+0	1.0693	1.0813	+0.0120
ARKANSAS	99,140	99,140	+0	0.5306	0.5366	+0.0060
CALIFORNIA	1,627,446	1,627,446	+0	8.7107	8.8089	+0.0982
COLORADO	266,062	266,062	+0	1.4240	1.4401	+0.0161
CONNECTICUT	182,421	182,421	+0	0.9763	0.9873	+0.0110
DELAWARE	121,632	120,456	-1,176	0.6510	0.6519	+0.0009
DIST. OF COLUM.	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	1,462,342	1,462,342	+0	7.8270	7.9152	+0.0882
GEORGIA	410,509	410,509	+0	2.1972	2.2219	+0.0247
HAWAII	319,745	319,745	+0	1.7114	1.7306	+0.0192
IDAHO	84,550	84,550	+0	0.4525	0.4576	+0.0051
ILLINOIS	283,432	282,361	-1,071	1.5170	1.5283	+0.0113
INDIANA	311,356	311,358	+0	1.6665	1.6852	+0.0187
IOWA	201,978	201,978	+0	1.0810	1.0932	+0.0122
KANSAS	289,833	289,833	+0	1.5513	1.5687	+0.0174
KENTUCKY	385,922	385,922	+0	2.0656	2.0888	+0.0232
LOUISIANA	294,689	294,689	+0	1.5772	1.5950	+0.0178
MAINE	154,585	154,585	+0	0.8274	0.8367	+0.0093
MARYLAND	395,334	323,065	-72,269	2.1159	1.7486	-0.3672
MASSACHUSETTS	543,030	543,030	+0	2.9065	2.9392	+0.0327
MICHIGAN	676,246	671,499	-4,747	3.6195	3.6346	+0.0151
MINNESOTA	247,995	247,995	+0	1.3273	1.3423	+0.0150
MISSISSIPPI	168,982	168,982	+0	0.9044	0.9146	+0.0102
MISSOURI	678,294	678,294	+0	3.6305	3.6714	+0.0409
MONTANA	20,353	20,353	+0	0.1089	0.1101	+0.0012
NEBRASKA	50,403	50,403	+0	0.2697	0.2728	+0.0031
NEVADA	44,552	33,423	-11,129	0.2384	0.1808	-0.0576
NEW HAMPSHIRE	295,824	295,824	+0	1.5833	1.6012	+0.0179
NEW JERSEY	601,439	601,439	+0	3.2191	3.2554	+0.0363
NEW MEXICO	32,651	32,651	+0	0.1747	0.1767	+0.0020
NEW YORK	1,936,911	1,863,849	-73,062	10.3671	10.0884	-0.2785
NORTH CAROLINA	438,387	438,387	+0	2.3464	2.3728	+0.0264
NORTH DAKOTA	14,829	14,829	+0	0.0793	0.0802	+0.0009
OHIO	825,198	825,198	+0	4.4167	4.4665	+0.0498
OKLAHOMA	129,107	129,107	+0	0.6910	0.6988	+0.0078
OREGON	301,060	301,060	+0	1.6113	1.6295	+0.0182
PENNSYLVANIA	532,285	529,130	-3,155	2.8490	2.8640	+0.0150
RHODE ISLAND	100,638	100,638	+0	0.5386	0.5447	+0.0061
SOUTH CAROLINA	251,738	251,738	+0	1.3474	1.3625	+0.0151
SOUTH DAKOTA	31,296	29,799	-1,497	0.1675	0.1612	-0.0062
TENNESSEE	365,840	365,840	+0	1.9581	1.9801	+0.0220
TEXAS	1,002,414	1,002,366	-48	5.3653	5.4255	+0.0602
UTAH	57,760	57,760	+0	0.3091	0.3126	+0.0035
VERMONT	31,260	31,260	+0	0.1673	0.1691	+0.0018
VIRGINIA	515,021	515,021	+0	2.7566	2.7876	+0.0310
WASHINGTON	481,274	481,274	+0	2.5759	2.6049	+0.0290
WEST VIRGINIA	189,591	189,591	+0	1.0147	1.0261	+0.0114
WISCONSIN	335,277	301,991	-33,286	1.7945	1.6345	-0.1599
WYOMING	9,645	9,645	+0	0.0516	0.0521	+0.0005
AMERICAN SAMOA	23,790	23,790	+0	0.1273	0.1287	+0.0014
GUAM	3,770	3,770	+0	0.0201	0.0203	+0.0002
MARIANAS GROUP	21,000	21,000	+0	0.1124	0.1136	+0.0012
PUERTO RICO	326,808	320,027	-6,781	1.7492	1.7322	-0.0169
PAC. TR. TERR.	15,642	15,642	+0	0.0837	0.0846	+0.0009
VIRGIN ISLANDS	16,277	16,277	+0	0.0871	0.0880	+0.0009
U.S. TOTALS	18,683,191	18,474,970	-208,221	100.0000	100.0000	+0.0000

1976 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CORRECTION OF COMBINED SEWER OVERFLOWS
THOUSANDS OF 1978 DOLLARS
CATEGORY V

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE
ALABAMA	0	0	+0	0.0000	0.0000	+0.0000
ALASKA	9,165	9,165	+0	0.0342	0.0355	+0.0013
ARIZONA	0	0	+0	0.0000	0.0000	+0.0000
ARKANSAS	0	0	+0	0.0000	0.0000	+0.0000
CALIFORNIA	1,186,676	167,715	-1,018,961	4.4342	0.6514	-3.7826
COLORADO	661	661	+0	0.0024	0.0025	+0.0001
CONNECTICUT	398,912	398,912	+0	1.4906	1.5496	+0.0590
DELAWARE	128,961	128,961	+0	0.4816	0.5009	+0.0191
DIST. OF COLUM.	170,671	170,671	+0	0.6377	0.6629	+0.0252
FLORIDA	8,533	8,533	+0	0.0318	0.0331	+0.0013
GEORGIA	218,732	218,732	+0	0.8173	0.8496	+0.0323
HAWAII	0	0	+0	0.0000	0.0000	+0.0000
IDAHO	57,256	57,256	+0	0.2139	0.2224	+0.0085
ILLINOIS	2,131,730	2,131,730	+0	7.9656	8.2808	+0.3152
INDIANA	2,920,755	2,920,755	+0	10.9139	11.3459	+0.4320
IOWA	192,885	192,885	+0	0.7207	0.7492	+0.0285
KANSAS	209,776	209,776	+0	0.7838	0.8148	+0.0310
KENTUCKY	592,419	592,419	+0	2.2136	2.3012	+0.0876
LOUISIANA	0	0	+0	0.0000	0.0000	+0.0000
MAINE	1,092,520	1,092,520	+0	4.0824	4.2439	+0.1615
MARYLAND	147,131	147,131	+0	0.5497	0.5715	+0.0218
MASSACHUSETTS	1,036,200	1,036,200	+0	3.8719	4.0252	+0.1533
MICHIGAN	1,602,291	1,602,291	+0	5.9872	6.2242	+0.2370
MINNESOTA	187,214	187,214	+0	0.6995	0.7272	+0.0277
MISSISSIPPI	33,286	33,286	+0	0.1243	0.1292	+0.0049
MISSOURI	757,919	757,919	+0	2.8321	2.9441	+0.1120
MONTANA	33,236	33,236	+0	0.1241	0.1290	+0.0049
NEBRASKA	70,806	70,806	+0	0.2645	0.2750	+0.0105
NEVADA	0	0	+0	0.0000	0.0000	+0.0000
NEW HAMPSHIRE	272,996	272,996	+0	1.0201	1.0604	+0.0403
NEW JERSEY	1,009,763	1,009,763	+0	3.7731	3.9225	+0.1494
NEW MEXICO	0	0	+0	0.0000	0.0000	+0.0000
NEW YORK	3,305,138	3,305,138	+0	12.3502	12.8391	+0.4889
NORTH CAROLINA	67,342	67,342	+0	0.2516	0.2615	+0.0099
NORTH DAKOTA	13,705	13,705	+0	0.0512	0.0532	+0.0020
OHIO	3,261,614	3,261,614	+0	12.1876	12.6700	+0.4824
OKLAHOMA	0	0	+0	0.0000	0.0000	+0.0000
OREGON	431,333	431,333	+0	1.6117	1.6755	+0.0638
PENNSYLVANIA	2,198,106	2,198,106	+0	8.2136	8.5387	+0.3251
RHODE ISLAND	329,342	329,342	+0	1.2306	1.2793	+0.0487
SOUTH CAROLINA	0	0	+0	0.0000	0.0000	+0.0000
SOUTH DAKOTA	24,057	24,057	+0	0.0898	0.0934	+0.0036
TENNESSEE	198,462	198,462	+0	0.7415	0.7709	+0.0294
TEXAS	39,148	39,148	+0	0.1462	0.1520	+0.0058
UTAH	2,199	2,199	+0	0.0082	0.0085	+0.0003
VERMONT	208,981	208,981	+0	0.7808	0.8117	+0.0309
VIRGINIA	272,811	272,811	+0	1.0194	1.0597	+0.0403
WASHINGTON	893,318	893,318	+0	3.3380	3.4701	+0.1321
WEST VIRGINIA	754,201	754,201	+0	2.8182	2.9297	+0.1115
WISCONSIN	268,905	268,905	+0	1.0048	1.0445	+0.0397
WYOMING	3,164	3,164	+0	0.0118	0.0122	+0.0004
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	19,360	19,360	+0	0.0723	0.0751	+0.0028
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	26,761,680	25,742,719	-1,018,961	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 35

1978 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR TREATMENT AND/OR CONTROL OF STORMWATERS
THOUSANDS OF 1978 DOLLARS
CATEGORY VI

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE	1978 STATE ESTIMATE	1978 EPA ASSESSMENT	DIFFERENCE
ALABAMA	1,428,370	1,428,370	+0	2.3149	2.3161	+0.0012
ALASKA	122,010	122,010	+0	0.1977	0.1978	+0.0001
ARIZONA	531,491	531,491	+0	0.8613	0.8618	+0.0005
ARKANSAS	610,525	610,525	+0	0.9894	0.9899	+0.0005
CALIFORNIA	4,047,876	4,047,876	+0	6.5604	6.5637	+0.0033
COLORADO	319,494	319,494	+0	0.5178	0.5180	+0.0002
CONNECTICUT	2,441,443	2,441,443	+0	3.9568	3.9588	+0.0020
DELAWARE	270,383	270,383	+0	0.4382	0.4384	+0.0002
DIST. OF COLUM.	184,561	184,561	+0	0.2991	0.2992	+0.0001
FLORIDA	6,909,125	6,909,125	+0	11.1977	11.2033	+0.0056
GEORGIA	1,068,665	1,068,665	+0	1.7320	1.7328	+0.0008
HAWAII	205,653	205,653	+0	0.3333	0.3334	+0.0001
IDAHO	41,671	41,671	+0	0.0675	0.0675	+0.0000
ILLINOIS	1,855,135	1,855,135	+0	3.0066	3.0081	+0.0015
INDIANA	1,633,752	1,633,752	+0	2.6478	2.6491	+0.0013
IOWA	482,182	482,182	+0	0.7814	0.7818	+0.0004
KANSAS	418,709	418,709	+0	0.6786	0.6789	+0.0003
KENTUCKY	925,625	925,625	+0	1.5001	1.5009	+0.0008
LOUISIANA	940,536	940,536	+0	1.5243	1.5250	+0.0007
MAINE	679,106	679,106	+0	1.1006	1.1011	+0.0005
MARYLAND	1,191,849	1,191,849	+0	1.9316	1.9326	+0.0010
MASSACHUSETTS	3,205,351	3,205,351	+0	5.1949	5.1975	+0.0026
MICHIGAN	1,719,430	1,719,430	+0	2.7867	2.7880	+0.0013
MINNESOTA	527,889	527,889	+0	0.8555	0.8559	+0.0004
MISSISSIPPI	415,338	415,338	+0	0.6731	0.6734	+0.0003
MISSOURI	1,172,799	1,172,799	+0	1.9007	1.9017	+0.0010
MONTANA	26,079	26,079	+0	0.0422	0.0422	+0.0000
NEBRASKA	131,578	131,578	+0	0.2132	0.2133	+0.0001
NEVADA	217,645	217,645	+0	0.3527	0.3529	+0.0002
NEW HAMPSHIRE	958,694	958,694	+0	1.5540	1.5548	+0.0008
NEW JERSEY	5,378,994	5,378,994	+0	8.7178	8.7221	+0.0043
NEW MEXICO	84,984	84,984	+0	0.1377	0.1377	+0.0000
NEW YORK	2,026,998	2,026,998	+0	3.2851	3.2868	+0.0017
NORTH CAROLINA	777,296	777,296	+0	1.2597	1.2603	+0.0006
NORTH DAKOTA	16,779	16,779	+0	0.0271	0.0271	+0.0000
OHIO	3,558,954	3,558,954	+0	5.7680	5.7709	+0.0029
OKLAHOMA	411,963	411,963	+0	0.6676	0.6679	+0.0003
OREGON	901,669	901,669	+0	1.4613	1.4620	+0.0007
PENNSYLVANIA	2,609,314	2,609,314	+0	4.2289	4.2310	+0.0021
RHODE ISLAND	347,016	347,016	+0	0.5624	0.5626	+0.0002
SOUTH CAROLINA	379,781	379,781	+0	0.6155	0.6158	+0.0003
SOUTH DAKOTA	30,032	30,032	+0	0.0486	0.0486	+0.0000
TENNESSEE	1,313,997	1,313,997	+0	2.1296	2.1306	+0.0010
TEXAS	3,773,298	3,773,298	+0	6.1154	6.1184	+0.0030
UTAH	171,921	171,921	+0	0.2786	0.2787	+0.0001
VERMONT	30,824	0	-30,824	0.0499	0.0000	-0.0498
VIRGINIA	1,975,668	1,975,668	+0	3.2019	3.2035	+0.0016
WASHINGTON	1,374,248	1,374,248	+0	2.2272	2.2283	+0.0011
WEST VIRGINIA	220,100	220,100	+0	0.3567	0.3568	+0.0001
WISCONSIN	1,230,055	1,230,055	+0	1.9935	1.9945	+0.0010
WYOMING	0	0	+0	0.0000	0.0000	+0.0000
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	404,121	404,121	+0	0.6549	0.6552	+0.0003
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	61,701,176	61,670,352	-30,824	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 36

1978 NEEDS SURVEY

EPA BACKLOG ESTIMATES
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1978 DOLLARS

	CATEGORIES								
	TOTAL	I	II	III A	III B	IV A	IV B	V	VI
ALABAMA	1,896	79	148	86	2	331	37	0	1,212
ALASKA	327	165	1	30	0	40	34	9	44
ARIZONA	439	45	4	1	0	118	33	0	235
ARKANSAS	638	15	65	29	2	134	18	0	373
CALIFORNIA	6,940	1,443	244	75	84	1,415	396	167	3,113
COLORADO	408	44	29	10	90	28	1	0	201
CONNECTICUT	3,489	160	115	31	16	405	116	398	2,243
DELAWARE	410	0	9	2	0	41	49	128	178
DIST. OF COLUM.	270	0	15	0	0	0	0	170	84
FLORIDA	6,205	248	578	70	0	1,560	196	8	3,542
GEORGIA	1,934	77	337	78	1	378	77	218	765
HAWAII	612	185	5	0	0	198	106	0	117
IDAHO	317	40	50	14	0	112	18	57	24
ILLINOIS	5,121	70	1,018	144	3	162	140	2,131	1,451
INDIANA	5,168	38	338	35	15	338	125	2,920	1,353
IOWA	1,319	161	246	80	0	123	105	192	409
KANSAS	928	153	33	48	16	121	117	209	228
KENTUCKY	2,152	59	238	74	0	575	82	592	529
LOUISIANA	1,344	90	12	45	12	320	80	0	781
MAINE	1,820	102	19	13	14	220	90	1,092	267
MARYLAND	3,386	13	508	7	1,347	221	98	147	1,043
MASSACHUSETTS	5,735	672	107	3	61	754	326	1,036	2,772
MICHIGAN	5,455	119	702	43	32	987	447	1,602	1,520
MINNESOTA	1,383	10	357	28	12	153	142	187	461
MISSISSIPPI	923	43	203	93	0	157	49	33	336
MISSOURI	3,047	566	9	59	6	228	355	757	1,062
MONTANA	105	18	0	2	1	23	6	33	21
NEBRASKA	325	117	2	1	0	32	10	70	90
NEVADA	203	3	36	1	0	38	10	0	113
NEW HAMPSHIRE	1,141	154	65	5	16	269	181	272	174
NEW JERSEY	6,879	478	292	137	1	655	140	1,009	4,162
NEW MEXICO	139	24	6	0	1	42	7	0	54
NEW YORK	14,386	2,131	887	103	2,762	2,436	901	3,305	1,877
NORTH CAROLINA	1,801	113	331	67	0	479	93	67	649
NORTH DAKOTA	39	10	6	0	1	3	0	13	9
OHIO	9,662	62	943	256	8	683	309	3,261	3,138
OKLAHOMA	598	10	37	36	17	139	36	0	310
OREGON	1,535	10	146	51	36	287	67	431	501
PENNSYLVANIA	7,121	337	774	10	0	982	278	2,198	2,539
RHODE ISLAND	1,286	144	87	10	2	260	91	329	360
SOUTH CAROLINA	871	89	48	51	0	314	34	0	334
SOUTH DAKOTA	130	22	50	3	1	5	1	24	21
TENNESSEE	2,299	116	288	124	0	512	92	198	988
TEXAS	3,469	0	278	214	67	566	140	39	2,164
UTAH	439	5	158	90	0	61	18	2	154
VERMONT	441	39	78	2	10	77	23	208	0
VIRGINIA	2,601	254	124	11	1	438	274	272	1,222
WASHINGTON	3,037	347	27	33	60	460	124	893	1,031
WEST VIRGINIA	1,917	418	68	1	0	514	153	754	189
WISCONSIN	2,337	67	474	76	143	259	135	268	900
WYOMING	44	30	1	7	0	1	0	3	0
AMERICAN SAMOA	37	11	0	0	1	9	14	0	0
GUAM	18	15	0	0	0	0	1	0	0
MARIANAS GROUP	36	7	0	0	0	17	11	0	0
PUERTO RICO	1,088	140	11	14	9	257	261	13	335
PAC. TR. TERR.	62	22	0	0	0	32	6	0	0
VIRGIN ISLANDS	30	14	0	0	0	11	5	0	0
U.S. TOTALS	124,762	9,663	10,634	2,437	4,871	19,022	6,685	25,742	45,704

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

FEBRUARY 10, 1979
TABLE 37

1978 NEEDS SURVEY

BACKLOG COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1978 DOLLARS
CATEGORIES I THRU V

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE	1978 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE
ALABAMA	693,901	947,377	+263,476	0.8650	0.8924	+0.0273
ALASKA	282,392	515,777	+233,385	0.3571	0.4858	+0.1286
ARIZONA	203,488	512,875	+309,387	0.2573	0.4831	+0.2257
ARKANSAS	264,904	501,930	+237,026	0.3350	0.4728	+0.1377
CALIFORNIA	3,827,186	8,041,449	+4,214,251	4.8409	7.5752	+2.7343
COLORADO	206,260	948,828	+742,568	0.2608	0.8938	+0.6329
CONNECTICUT	1,246,095	1,383,067	+136,972	1.5761	1.3028	-0.2732
DELAWARE	232,238	389,310	+157,072	0.2937	0.3667	+0.0729
DIST. OF COLUM.	186,077	186,077	+0	0.2353	0.1752	-0.0600
FLORIDA	2,662,374	4,976,527	+2,314,153	3.3678	4.6880	+1.3204
GEORGIA	1,168,453	1,755,995	+587,542	1.4779	1.6542	+0.1762
HAWAII	495,130	859,176	+364,046	0.6262	0.8093	+0.1830
IDAHO	293,848	446,643	+152,795	0.3716	0.4207	+0.0490
ILLINOIS	3,670,164	4,105,836	+435,672	4.6423	3.8678	-0.7745
INDIANA	3,814,181	4,205,646	+391,465	4.8245	3.9618	-0.8626
IOWA	909,552	1,096,588	+187,036	1.1504	1.0330	-0.1174
KANSAS	700,234	1,103,188	+402,954	0.8857	1.0392	+0.1535
KENTUCKY	1,623,014	2,085,385	+462,371	2.0529	1.9644	-0.0884
LOUISIANA	563,070	1,136,873	+573,803	0.7122	1.0709	+0.3587
MAINE	1,553,022	1,638,839	+85,817	1.9644	1.5438	-0.4205
MARYLAND	2,342,871	2,910,164	+567,293	2.9634	2.7414	-0.2220
MASSACHUSETTS	2,963,378	3,426,945	+463,567	3.7483	3.2282	-0.5200
MICHIGAN	3,935,794	4,485,332	+549,538	4.9783	4.2253	-0.7530
MINNESOTA	922,125	1,347,694	+425,569	1.1663	1.2695	+0.1031
MISSISSIPPI	586,860	774,969	+188,109	0.7423	0.7300	-0.0122
MISSOURI	1,985,067	2,535,324	+550,257	2.5108	2.3883	-0.1225
MONTANA	84,010	125,986	+41,976	0.1062	0.1186	+0.0124
NEBRASKA	234,852	317,681	+82,829	0.2970	0.2992	+0.0022
NEVADA	90,664	260,078	+169,414	0.1146	0.2450	+0.1303
NEW HAMPSHIRE	966,759	1,154,711	+187,952	1.2228	1.0877	-0.1350
NEW JERSEY	2,716,182	4,196,374	+1,480,192	3.4356	3.9531	+0.5174
NEW MEXICO	84,403	158,752	+74,349	0.1067	0.1495	+0.0427
NEW YORK	12,509,049	14,156,469	+1,647,420	15.8226	13.3358	-2.4867
NORTH CAROLINA	1,152,602	1,657,975	+505,373	1.4579	1.5618	+0.1039
NORTH DAKOTA	30,654	82,352	+51,698	0.0387	0.0775	+0.0388
OHIO	5,524,995	6,777,949	+1,252,954	6.9885	6.3850	-0.6034
OKLAHOMA	278,504	572,101	+293,597	0.3522	0.5389	+0.1866
OREGON	1,033,644	1,536,102	+502,458	1.3074	1.4470	+0.1396
PENNSYLVANIA	4,582,012	5,358,454	+776,442	5.7957	5.0478	-0.7479
RHODE ISLAND	926,019	945,772	+19,753	1.1713	0.8909	-0.2803
SOUTH CAROLINA	536,750	840,375	+303,625	0.6789	0.7916	+0.1127
SOUTH DAKOTA	108,951	207,041	+98,090	0.1378	0.1950	+0.0572
TENNESSEE	1,310,499	1,757,853	+447,354	1.6576	1.6559	-0.0016
TEXAS	1,305,761	3,110,742	+1,804,981	1.6516	2.9304	+1.2787
UTAH	285,418	399,396	+113,978	0.3610	0.3762	+0.0152
VERMONT	441,786	460,989	+19,203	0.5588	0.4342	-0.1245
VIRGINIA	1,378,406	2,008,651	+630,245	1.7435	1.8922	+0.1486
WASHINGTON	2,005,510	2,761,303	+755,793	2.5367	2.6012	+0.0644
WEST VIRGINIA	1,728,048	1,845,897	+117,849	2.1857	1.7388	-0.4469
WISCONSIN	1,437,545	1,797,595	+360,050	1.8183	1.6933	-0.1249
WYOMING	44,337	75,094	+30,757	0.0560	0.0707	+0.0146
AMERICAN SAMOA	37,038	57,318	+20,280	0.0468	0.0539	+0.0071
GUAM	18,914	44,858	+25,944	0.0239	0.0422	+0.0183
MARIANAS GROUP	36,261	56,322	+20,061	0.0458	0.0530	+0.0071
PUERTO RICO	753,478	977,206	+223,728	0.9530	0.9205	-0.0325
PAC. TR. TERR.	62,326	90,287	+27,961	0.0788	0.0850	+0.0062
VIRGIN ISLANDS	30,990	44,120	+13,130	0.0391	0.0415	+0.0023
U.S. TOTALS	79,058,047	106,153,617	+27,095,570	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 38

1978 NEEDS SURVEY

BACKLOG COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1978 DOLLARS
CATEGORIES I AND II

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE	1978 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE
ALABAMA	225,676	346,059	+120,383	1.1118	0.9721	-0.1396
ALASKA	166,476	339,630	+173,154	0.8201	0.9540	+0.1339
ARIZONA	49,384	192,220	+142,816	0.2432	0.5399	+0.2967
ARKANSAS	80,235	236,892	+156,657	0.3952	0.6654	+0.2702
CALIFORNIA	1,688,620	4,671,591	+2,982,971	8.3191	13.1231	+4.8040
COLORADO	74,564	552,880	+478,316	0.3673	1.5531	+1.1858
CONNECTICUT	275,546	346,503	+70,957	1.3575	0.9733	-0.3841
DELAWARE	9,320	94,873	+85,553	0.0459	0.2665	+0.2206
DIST. OF COLUM.	15,406	15,406	+0	0.0758	0.0432	-0.0325
FLORIDA	825,426	1,874,127	+1,048,701	4.0665	5.2646	+1.1981
GEORGIA	414,362	668,389	+254,027	2.0413	1.8776	-0.1636
HAWAII	190,998	341,338	+150,340	0.9409	0.9588	+0.0179
IDAHO	90,520	177,542	+87,022	0.4459	0.4987	+0.0528
ILLINOIS	1,086,956	1,380,378	+293,422	5.3549	3.8776	-1.4772
INDIANA	377,039	582,732	+205,693	1.8575	1.6369	-0.2205
IOWA	407,502	497,918	+90,416	2.0075	1.3987	-0.6087
KANSAS	186,941	417,503	+230,562	0.9209	1.1728	+0.2519
KENTUCKY	298,220	457,323	+159,103	1.4692	1.2846	-0.1845
LOUISIANA	103,655	463,088	+359,433	0.5106	1.3008	+0.7902
MAINE	122,515	143,812	+21,297	0.6035	0.4039	-0.1995
MARYLAND	521,024	863,742	+342,718	2.5668	2.4263	-0.1404
MASSACHUSETTS	779,831	1,027,054	+247,223	3.8419	2.8851	-0.9567
MICHIGAN	822,397	1,147,576	+325,179	4.0516	3.2237	-0.8278
MINNESOTA	398,587	718,291	+319,704	1.9636	2.0177	+0.0541
MISSISSIPPI	247,113	316,128	+69,015	1.2174	0.8880	-0.3293
MISSOURI	576,886	803,136	+226,248	2.8420	2.2561	-0.5858
MONTANA	16,582	44,423	+27,841	0.0816	0.1247	+0.0431
NEBRASKA	119,954	162,813	+42,859	0.5909	0.4573	-0.1335
NEVADA	39,782	186,742	+146,960	0.1959	0.5245	+0.3286
NEW HAMPSHIRE	219,955	293,083	+73,128	1.0836	0.8233	-0.2602
NEW JERSEY	771,493	1,790,495	+1,019,002	3.8008	5.0297	+1.2289
NEW MEXICO	32,597	82,091	+49,494	0.1605	0.2306	+0.0701
NEW YORK	2,998,901	3,684,387	+685,486	14.7743	10.3499	-4.4243
NORTH CAROLINA	444,867	605,250	+160,383	2.1916	1.7002	-0.4913
NORTH DAKOTA	10,375	48,178	+37,803	0.0511	0.1353	+0.0842
OHIO	1,005,978	1,743,033	+737,055	4.9560	4.8964	-0.0595
OKLAHOMA	48,486	246,156	+197,670	0.2388	0.6914	+0.4526
OREGON	156,642	425,526	+268,884	0.7717	1.1953	+0.4236
PENNSYLVANIA	1,111,908	1,638,165	+526,257	5.4779	4.6018	-0.8760
RHODE ISLAND	231,467	241,885	+10,418	1.1403	0.6794	-0.4608
SOUTH CAROLINA	136,117	222,042	+85,925	0.6705	0.6237	-0.0467
SOUTH DAKOTA	73,403	143,149	+69,746	0.3616	0.4021	+0.0405
TENNESSEE	382,669	556,558	+173,889	1.8852	1.5634	-0.3217
TEXAS	276,600	1,219,866	+943,266	1.3626	3.4267	+2.0641
UTAH	162,216	237,288	+75,072	0.7991	0.6665	-0.1325
VERMONT	118,229	130,035	+11,806	0.5824	0.3652	-0.2171
VIRGINIA	378,855	768,518	+389,663	1.8664	2.1588	+0.2924
WASHINGTON	384,075	782,627	+398,552	1.8921	2.1985	+0.3064
WEST VIRGINIA	303,286	385,025	+81,739	1.4941	1.0815	-0.4125
WISCONSIN	543,640	736,769	+193,129	2.6782	2.0696	-0.6085
WYOMING	31,553	53,178	+21,625	0.1554	0.1493	-0.0060
AMERICAN SAMOA	11,885	22,894	+11,009	0.0585	0.0643	+0.0058
GUAM	15,969	39,496	+23,527	0.0786	0.1109	+0.0323
MARIANAS GROUP	7,009	17,330	+10,321	0.0345	0.0486	+0.0141
PUERTO RICO	191,264	356,585	+165,321	0.9422	1.0016	+0.0594
PAC. TR. TERR.	22,752	41,862	+19,110	0.1120	0.1175	+0.0055
VIRGIN ISLANDS	14,271	16,425	+2,154	0.0703	0.0461	-0.0241
U.S. TOTALS	20,297,981	35,597,985	+15,300,004	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 39

1978 NEEDS SURVEY

BACKLOG COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1978 DOLLARS
CATEGORIES I, II AND IV B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE	1978 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE
ALABAMA	263,250	526,726	+263,476	0.9755	0.9741	-0.0013
ALASKA	201,416	434,801	+233,385	0.7464	0.8041	+0.0577
ARIZONA	82,631	391,988	+309,357	0.3062	0.7249	+0.4187
ARKANSAS	99,006	336,032	+237,026	0.3669	0.6214	+0.2545
CALIFORNIA	2,084,776	6,299,037	+4,214,261	7.7261	11.6491	+3.9230
COLORADO	76,374	818,942	+742,568	0.2830	1.5145	+1.2315
CONNECTICUT	391,952	528,924	+136,972	1.4525	0.9781	-0.4743
DELAWARE	58,752	215,329	+156,577	0.2177	0.3982	+0.1805
DIST. OF COLUM.	15,406	15,406	+0	0.0570	0.0284	-0.0285
FLORIDA	1,022,316	3,336,469	+2,314,153	3.7886	6.1703	+2.3817
GEORGIA	491,805	1,078,898	+587,093	1.8226	1.9952	+0.1726
HAWAII	297,037	661,083	+364,046	1.1008	1.2225	+0.1217
IDAHO	109,297	262,092	+152,795	0.4050	0.4847	+0.0797
ILLINOIS	1,227,067	1,662,739	+435,672	4.5474	3.0749	-1.4724
INDIANA	502,625	894,090	+391,465	1.8627	1.6534	-0.2092
IOWA	512,860	699,896	+187,036	1.9006	1.2943	-0.6062
KANSAS	304,382	707,336	+402,954	1.1280	1.3081	+0.1801
KENTUCKY	380,874	843,245	+462,371	1.4115	1.5594	+0.1479
LOUISIANA	183,974	757,777	+573,803	0.6818	1.4013	+0.7195
MAINE	212,580	298,397	+85,817	0.7878	0.5518	-0.2359
MARYLAND	619,514	1,186,807	+567,293	2.2959	2.1948	-0.1010
MASSACHUSETTS	1,106,590	1,570,084	+463,494	4.1009	2.9036	-1.1972
MICHIGAN	1,269,571	1,819,075	+549,504	4.7050	3.3641	-1.3408
MINNESOTA	540,717	966,286	+425,569	2.0038	1.7870	-0.2167
MISSISSIPPI	297,001	485,110	+188,109	1.1006	0.8971	-0.2034
MISSOURI	932,233	1,481,430	+549,197	3.4548	2.7396	-0.7151
MONTANA	22,800	64,776	+41,976	0.0844	0.1197	+0.0353
NEBRASKA	130,387	213,216	+82,829	0.4832	0.3943	-0.0888
NEVADA	50,751	220,165	+169,414	0.1880	0.4071	+0.2191
NEW HAMPSHIRE	400,955	588,907	+187,952	1.4859	1.0890	-0.3968
NEW JERSEY	911,742	2,391,934	+1,480,192	3.3788	4.4235	+1.0447
NEW MEXICO	40,393	114,742	+74,349	0.1496	0.2121	+0.0625
NEW YORK	3,900,896	5,548,236	+1,647,340	14.4566	10.2606	-4.1959
NORTH CAROLINA	538,264	1,043,637	+505,373	1.9947	1.9300	-0.0646
NORTH DAKOTA	11,309	63,007	+51,698	0.0419	0.1165	+0.0746
OHIO	1,315,277	2,568,231	+1,252,954	4.8743	4.7495	-0.1247
OKLAHOMA	85,326	375,263	+289,937	0.3162	0.6939	+0.3777
OREGON	224,139	726,586	+502,447	0.8306	1.3437	+0.5131
PENNSYLVANIA	1,390,853	2,167,295	+776,442	5.1544	4.0080	-1.1463
RHODE ISLAND	322,770	342,523	+19,753	1.1961	0.6334	-0.5626
SOUTH CAROLINA	170,155	473,780	+303,625	0.6305	0.8761	+0.2456
SOUTH DAKOTA	74,858	172,948	+98,090	0.2774	0.3198	+0.0424
TENNESSEE	475,044	922,398	+447,354	1.7605	1.7058	-0.0546
TEXAS	417,380	2,222,232	+1,804,852	1.5468	4.1096	+2.5628
UTAH	181,070	295,048	+113,978	0.6710	0.5456	-0.1253
VERMONT	142,092	161,295	+19,203	0.5265	0.2982	-0.2282
VIRGINIA	653,323	1,283,539	+630,216	2.4212	2.3737	-0.0474
WASHINGTON	508,108	1,263,901	+755,793	1.8830	2.3373	+0.4543
WEST VIRGINIA	456,767	574,616	+117,849	1.6927	1.0626	-0.6300
WISCONSIN	678,710	1,038,760	+360,050	2.5152	1.9210	-0.5941
WYOMING	32,066	62,823	+30,757	0.1188	0.1161	-0.0026
AMERICAN SAMOA	26,404	46,684	+20,280	0.0978	0.0863	-0.0114
GUAM	17,322	43,266	+25,944	0.0641	0.0800	+0.0159
MARIANAS GROUP	18,269	38,330	+20,061	0.0677	0.0708	+0.0031
PUERTO RICO	452,884	676,612	+223,728	1.6783	1.2512	-0.4270
PAC. TR. TERR.	29,543	57,504	+27,951	0.1094	0.1063	-0.0030
VIRGIN ISLANDS	19,572	32,702	+13,130	0.0725	0.0604	-0.0120
U.S. TOTALS	26,983,435	54,072,955	+27,089,520	100.0000	100.0000	+0.0000

FEBRUARY 10, 1979
TABLE 40

1978 NEEDS SURVEY

BACKLOG PER CAPITA COSTS
FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
* THOUSANDS OF 1978 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I THRU V

	1978 * BACKLOG	1977 POPULATION	BACKLOG PER CAPITA
ALABAMA	683,901	3,690	185
ALASKA	282,392	407	693
ARIZONA	203,488	2,296	88
ARKANSAS	264,904	2,144	123
CALIFORNIA	3,827,188	21,896	174
COLORADO	206,260	2,619	78
CONNECTICUT	1,246,095	3,108	400
DELAWARE	232,238	582	399
DIST. OF COLUM.	186,377	690	269
FLORIDA	2,662,374	8,452	314
GEORGIA	1,168,453	5,048	231
HAWAII	495,130	895	553
IDAHO	293,848	857	342
ILLINOIS	3,670,164	11,245	326
INDIANA	3,814,181	5,330	715
IOWA	909,552	2,879	315
KANSAS	700,234	2,326	301
KENTUCKY	1,623,014	3,458	469
LOUISIANA	563,070	3,921	143
MAINE	1,553,022	1,055	1,431
MARYLAND	2,342,871	4,139	566
MASSACHUSETTS	2,963,378	5,782	512
MICHIGAN	3,935,794	9,129	431
MINNESOTA	922,125	3,975	231
MISSISSIPPI	586,860	2,389	245
MISSOURI	1,985,067	4,801	413
MONTANA	84,010	761	110
NEBRASKA	234,852	1,561	150
NEVADA	90,664	633	143
NEW HAMPSHIRE	966,759	849	1,138
NEW JERSEY	2,716,182	7,329	370
NEW MEXICO	84,403	1,190	70
NEW YORK	12,509,049	17,924	697
NORTH CAROLIN.	1,152,602	5,525	208
NORTH DAKOTA	30,654	653	46
OHIO	5,524,995	10,701	516
OKLAHOMA	278,504	2,811	99
OREGON	1,033,644	2,376	435
PENNSYLVANIA	4,582,012	11,785	388
RHODE ISLAND	926,019	935	990
SOUTH CAROLINA	536,750	2,876	186
SOUTH DAKOTA	108,951	689	158
TENNESSEE	1,310,499	4,299	304
TEXAS	1,305,761	12,830	101
UTAH	285,418	1,268	225
VERMONT	441,786	483	914
VIRGINIA	1,378,406	5,135	268
WASHINGTON	2,005,510	3,658	546
WEST VIRGINIA	1,728,048	1,859	929
WISCONSIN	1,437,545	4,651	309
WYOMING	44,337	406	109
AMERICAN SAMOA	37,038	29	1,277
GUAM	18,914	93	203
MARIANAS GROUP	36,261	12	3,021
PUERTO RICO	753,478	3,282	229
PAC. TR. TERR.	62,326	114	546
VIRGIN ISLANDS	30,990	95	326

FEBRUARY 10, 1979
TABLE 41

1978 NEEDS SURVEY

BACKLOG PER CAPITA COSTS
FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
* THOUSANDS OF 1978 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I II IV8

	1978 * BACKLOG	1977 POPULATION	BACKLOG PER CAPITA
ALABAMA	263,250	3,690	71
ALASKA	201,416	407	494
ARIZONA	82,631	2,296	35
ARKANSAS	99,006	2,144	46
CALIFORNIA	2,084,776	21,896	95
COLORADO	76,374	2,619	29
CONNECTICUT	391,952	3,108	126
DELAWARE	58,752	582	100
DIST. OF COLUM.	15,406	690	22
FLORIDA	1,022,316	8,452	120
GEORGIA	491,805	5,048	97
HAWAII	297,037	895	331
IDAHO	109,297	857	127
ILLINOIS	1,227,067	11,245	109
INDIANA	502,625	5,330	94
IOWA	512,860	2,879	178
KANSAS	304,382	2,326	130
KENTUCKY	380,874	3,458	110
LOUISIANA	183,974	3,921	46
MAINE	212,580	1,085	195
MARYLAND	619,514	4,139	149
MASSACHUSETTS	1,106,590	5,782	191
MICHIGAN	1,269,571	9,129	139
MINNESOTA	540,717	3,975	136
MISSISSIPPI	297,001	2,389	124
MISSOURI	932,233	4,801	194
MONTANA	22,800	761	29
NEBRASKA	130,387	1,561	83
NEVADA	50,751	633	80
NEW HAMPSHIRE	400,955	849	472
NEW JERSEY	911,742	7,329	124
NEW MEXICO	40,393	1,190	33
NEW YORK	3,900,896	17,924	217
NORTH CAROLINA	538,264	5,525	97
NORTH DAKOTA	11,309	653	17
OHIO	1,315,277	10,701	122
OKLAHOMA	85,326	2,811	30
OREGON	224,139	2,376	94
PENNSYLVANIA	1,393,853	11,785	118
RHODE ISLAND	322,770	935	345
SOUTH CAROLINA	170,155	2,876	59
SOUTH DAKOTA	74,858	689	108
TENNESSEE	475,044	4,299	110
TEXAS	417,380	12,830	32
UTAH	181,070	1,268	142
VERMONT	142,092	483	294
VIRGINIA	653,323	5,135	127
WASHINGTON	508,108	3,658	138
WEST VIRGINIA	456,767	1,859	245
WISCONSIN	678,710	4,651	145
WYOMING	32,066	406	78
AMERICAN SAMOA	26,404	29	910
GUAM	17,322	93	186
MARIANAS GROUP	18,269	12	1,522
PUERTO RICO	452,884	3,282	137
PAC. TR. TERR.	29,543	114	259
VIRGIN ISLANDS	19,572	95	206
U.S. TOTALS	26,983,435	219,955	122

1978 NEEDS SURVEY

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TABLE 42

NUMBER OF EPA COST ASSESSMENTS BY CATEGORY

STATE	TOTAL	CAT I	CAT II	CAT IIIA	CAT IIIB	CAT IVA	CAT IVB
ALABAMA	1,093	136	134	146	1	323	353
ALASKA	495	201	2	8	1	74	119
ARIZONA	365	117	10	7	2	91	138
ARKANSAS	1,729	133	448	48	7	491	602
CALIFORNIA	3,330	1,158	105	137	15	786	1,129
COLORADO	623	186	33	42	6	62	300
CONNECTICUT	408	85	16	38	10	123	132
DELAWARE	88	3	17	8	1	24	35
DIST. OF COLUM.	1	0	1	0	0	0	0
FLORIDA	1,129	65	246	107	0	334	377
GEORGIA	1,349	177	165	235	1	325	446
HAWAII	120	36	1	5	0	36	42
IDAHO	568	155	12	76	1	117	207
ILLINOIS	1,366	275	281	190	11	259	346
INDIANA	1,426	76	364	94	6	372	514
IOWA	2,093	658	112	209	3	362	749
KANSAS	1,167	427	5	92	9	227	407
KENTUCKY	1,273	126	238	145	0	345	419
LOUISIANA	1,227	352	29	76	25	304	440
MAINE	574	119	20	23	18	219	175
MARYLAND	971	48	260	22	3	273	365
MASSACHUSETTS	497	55	25	29	15	186	183
MICHIGAN	1,583	227	142	107	9	510	588
MINNESOTA	1,251	141	421	135	6	231	317
MISSISSIPPI	1,639	162	324	208	8	415	530
MISSOURI	2,128	661	25	119	20	559	744
MONTANA	298	100	2	25	5	41	125
NEBRASKA	781	235	2	26	0	163	351
NEVADA	156	40	7	4	2	40	63
NEW HAMPSHIRE	479	72	47	20	17	160	162
NEW JERSEY	632	37	94	116	1	235	149
NEW MEXICO	372	100	15	1	9	109	138
NEW YORK	2,511	357	251	351	22	851	679
NORTH CAROLINA	1,851	216	348	205	0	514	568
NORTH DAKOTA	493	205	0	3	1	84	196
OHIO	2,035	104	511	225	12	494	689
OKLAHOMA	1,551	258	303	40	22	350	578
OREGON	652	58	87	88	13	132	274
PENNSYLVANIA	3,615	688	350	52	0	1,197	1,328
RHODE ISLAND	96	12	7	9	1	35	32
SOUTH CAROLINA	972	123	113	183	0	290	263
SOUTH DAKOTA	617	267	15	19	8	78	230
TENNESSEE	967	62	188	155	0	264	296
TEXAS	2,821	8	809	179	39	765	1,021
UTAH	619	5	185	32	0	156	241
VERMONT	272	38	31	14	19	87	83
VIRGINIA	1,142	285	86	50	7	316	394
WASHINGTON	1,013	230	9	80	11	263	420
WEST VIRGINIA	1,521	387	87	10	3	486	548
WISCONSIN	1,409	220	198	144	20	355	472
WYOMING	233	98	2	25	0	16	92
AMERICAN SAMOA	16	5	0	0	1	5	5
GUAM	12	2	2	2	0	2	2
MARIANAS	10	4	0	0	0	3	3
PUERTO RICO	117	21	5	24	1	33	33
PAC. TR. TERR.	79	34	0	0	0	23	22
VIRGIN ISLANDS	12	3	0	1	0	4	4
U.S. TOTALS	55,757	10,074	7,190	4,389	384	14,599	19,121

1978 NEEDS SURVEY

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TABLE 43

NUMBER OF STATE COST ESTIMATES DIFFERING FROM EPA ASSESSMENTS

STATE	TOTAL	CAT I	CAT II	CAT IIIA	CAT IIIB	CAT IVA	CAT IVB	CAT V	CAT VI
CALIFORNIA	1	0	0	0	0	0	0	1	0
DELAWARE	3	0	0	0	0	0	3	0	0
ILLINOIS	4	0	3	0	0	0	1	0	0
KANSAS	1	0	0	1	0	0	0	0	0
MARYLAND	24	2	20	0	0	1	1	0	0
MICHIGAN	29	5	6	3	1	7	7	0	0
MINNESOTA	121	121	0	0	0	0	0	0	0
MISSOURI	2	1	0	0	0	1	0	0	0
NEVADA	5	2	0	0	0	0	3	0	0
NEW YORK	809	107	122	9	0	298	273	0	0
PENNSYLVANIA	64	41	9	0	0	6	8	0	0
SOUTH DAKOTA	156	52	0	0	0	52	52	0	0
TEXAS	1	0	0	0	0	0	1	0	0
VERMONT	3	0	2	0	0	0	0	0	1
WASHINGTON	2	0	0	2	0	0	0	0	0
WEST VIRGINIA	2	1	0	1	0	0	0	0	0
WISCONSIN	37	4	7	5	3	7	11	0	0
PUERTO RICO	3	1	0	0	0	1	1	0	0
U.S. TOTALS	1267	337	169	31	4	373	361	1	1

1978 NEEDS SURVEY

FEBRUARY 10, 1979
TABLE 44

PERCENT OF STATE DOLLAR NEEDS
BY BASIS OF COST ESTIMATE

STATE	STATE CERTIFICATION	ANALYSIS COMPLETED	EVALUATION SURVEY COMPLETED	ENGINEER / CONSULTANT FIRM EST.	COST OF COMPARABLE CONSTRUCTION	ENGINEER / CONSULTANT PRELIM. EST.	EPA COST GUIDANCE	COST EFFECTIVE ANALYSIS	ROUGH ESTIMATE	NONE	TOTAL
ALABAMA	0.0	4.8	0.4	0.0	2.2	25.6	67.1	0.0	0.0	0.0	100.0
ALASKA	0.0	0.0	0.1	0.1	0.0	30.2	65.8	3.8	0.0	0.0	100.0
ARIZONA	0.0	0.1	0.1	0.0	18.6	42.0	38.8	0.5	0.0	0.0	100.0
ARKANSAS	0.0	2.7	0.0	0.7	7.7	12.6	71.0	5.2	0.0	0.0	100.0
CALIFORNIA	0.0	0.5	0.2	0.0	25.7	24.2	41.8	7.7	0.0	0.0	100.0
COLORADO	0.0	0.0	0.0	0.0	25.3	44.1	30.5	0.0	0.0	0.0	100.0
CONNECTICUT	0.0	2.6	0.1	0.1	29.2	30.1	37.9	0.0	0.0	0.0	100.0
DELAWARE	0.0	0.1	0.6	0.0	8.2	54.0	37.1	0.0	0.0	0.0	100.0
DIST. OF COLUM.	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0
FLORIDA	0.0	0.9	0.2	0.0	5.8	37.1	55.9	0.0	0.0	0.0	100.0
GEORGIA	0.0	3.5	0.5	3.0	11.7	36.1	45.2	0.0	0.0	0.0	100.0
HAWAII	0.0	0.0	0.0	0.0	3.4	53.3	43.2	0.0	0.0	0.0	100.0
IDAHO	0.0	0.0	0.1	0.0	6.8	36.6	56.4	0.0	0.0	0.0	100.0
ILLINOIS	0.0	2.1	1.9	2.0	2.1	78.3	13.6	0.1	0.0	0.0	100.0
INDIANA	0.0	1.1	1.3	3.3	2.9	48.9	42.3	0.2	0.0	0.0	100.0
IOWA	0.0	3.5	0.9	2.5	16.7	58.0	18.2	0.1	0.0	0.0	100.0
KANSAS	0.0	3.7	0.0	0.1	5.8	66.7	23.5	0.1	0.0	0.0	100.0
KENTUCKY	0.0	4.1	0.0	0.0	13.4	45.3	37.2	0.0	0.0	0.0	100.0
LOUISIANA	0.0	1.5	1.4	0.1	0.4	22.4	52.8	21.4	0.0	0.0	100.0
MAINE	0.0	0.7	0.4	0.1	15.3	58.7	24.9	0.0	0.0	0.0	100.0
MARYLAND	0.0	0.2	0.0	0.0	8.8	53.3	37.7	0.0	0.0	0.0	100.0
MASSACHUSETTS	0.0	0.2	0.1	0.5	10.4	77.0	11.8	0.0	0.0	0.0	100.0
MICHIGAN	0.0	0.6	0.0	2.4	0.7	74.3	22.1	0.0	0.0	0.0	100.0
MINNESOTA	0.0	1.3	0.1	0.8	1.0	69.6	27.2	0.0	0.0	0.0	100.0
MISSISSIPPI	0.0	10.2	0.9	0.0	4.3	51.5	33.1	0.0	0.0	0.0	100.0
MISSOURI	0.0	0.8	0.1	3.8	0.5	78.9	14.3	1.7	0.0	0.0	100.0
MONTANA	0.0	0.3	0.0	1.6	0.0	59.6	38.5	0.0	0.0	0.1	100.0
NEBRASKA	0.0	0.0	0.0	1.5	3.8	67.3	27.4	0.0	0.0	0.0	100.0
NEVADA	0.0	0.3	0.0	0.3	22.1	44.6	25.1	7.5	0.0	0.0	100.0
NEW HAMPSHIRE	0.0	0.4	0.0	0.0	26.7	54.8	18.0	0.0	0.0	0.0	100.0
NEW JERSEY	0.0	1.4	0.9	0.4	6.5	52.7	38.1	0.0	0.0	0.0	100.0
NEW MEXICO	0.0	0.0	0.1	0.0	4.1	55.4	40.4	0.0	0.0	0.0	100.0
NEW YORK	0.0	0.7	6.7	1.7	19.7	44.7	26.5	0.0	0.0	0.0	100.0
NORTH CAROLINA	0.0	3.6	0.1	0.6	6.0	59.0	30.7	0.0	0.0	0.0	100.0
NORTH DAKOTA	0.0	0.0	0.0	4.6	7.3	44.3	43.8	0.0	0.0	0.0	100.0
OHIO	0.0	0.2	0.1	0.8	6.8	51.7	40.4	0.0	0.0	0.0	100.0
OKLAHOMA	0.0	4.2	0.0	0.1	5.4	29.4	47.8	13.2	0.0	0.0	100.0
OREGON	0.0	0.6	4.2	1.5	20.6	36.8	36.2	0.0	0.0	0.0	100.0
PENNSYLVANIA	0.0	0.2	0.0	0.5	2.1	26.3	70.8	0.0	0.0	0.0	100.0
RHODE ISLAND	0.0	0.2	0.0	1.4	37.8	26.4	34.2	0.0	0.0	0.0	100.0
SOUTH CAROLINA	0.0	5.9	0.0	0.4	4.5	49.8	39.3	0.0	0.0	0.0	100.0
SOUTH DAKOTA	0.0	0.5	0.0	1.0	0.1	81.5	17.0	0.0	0.0	0.0	100.0
TENNESSEE	0.0	6.8	0.4	0.0	3.0	51.7	38.1	0.0	0.0	0.0	100.0
TEXAS	0.0	5.2	1.1	0.5	50.5	18.5	18.5	5.6	0.0	0.0	100.0
UTAH	0.0	0.0	0.0	2.1	0.0	49.4	48.4	0.0	0.0	0.0	100.0
VERMONT	0.0	0.7	0.3	3.9	21.2	37.5	36.5	0.0	0.0	0.0	100.0
VIRGINIA	0.0	0.2	0.0	1.3	1.3	36.6	60.6	0.0	0.0	0.0	100.0
WASHINGTON	0.0	0.3	0.2	0.0	5.7	64.9	28.7	0.2	0.0	0.0	100.0
WEST VIRGINIA	0.8	0.0	0.0	1.6	0.9	21.4	76.1	0.0	0.0	0.0	100.0
WISCONSIN	0.0	1.2	0.5	2.2	1.5	63.5	24.8	6.3	0.0	0.0	100.0
WYOMING	0.0	0.0	0.0	0.0	5.3	20.0	74.7	0.0	0.0	0.0	100.0
AMERICAN SAMOA	0.0	0.0	0.0	0.0	36.8	53.5	9.7	0.0	0.0	0.0	100.0
GUAM	0.0	0.0	0.0	0.0	1.3	16.9	81.7	0.0	0.0	0.0	100.0
MARIANAS	0.0	0.0	0.0	0.0	0.0	0.0	31.9	68.1	0.0	0.0	100.0
PUERTO RICO	0.0	0.7	0.0	0.3	1.9	78.9	18.1	0.0	0.0	0.0	100.0
PAC. TR. TERR.	0.0	0.0	0.0	0.0	3.9	16.5	31.6	48.0	0.0	0.0	100.0
VIRGIN ISLANDS	0.0	0.3	0.0	0.0	68.3	31.4	0.0	0.0	0.0	0.0	100.0

1978 NEEDS SURVEY

FEBRUARY 1[illegible], 1979
TABLE 45

PERCENT OF NATIONAL DOLLAR NEEDS
BY BASIS OF COST ESTIMATE

BASIS OF ESTIMATE	CAT I	CAT II	CAT IIIA	CAT IIIB	CAT IVA	CAT IVB	TOTAL
STATE CERTIFICATION	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANALYSIS COMPLETED	0.0	0.0	45.5	0.6	0.0	0.0	1.4
EVALUATION SURVEY COMPLETED	0.0	0.0	9.2	15.8	0.0	0.0	1.2
ENGINEER/CONSULTANT FIRM ESTIMATE	0.6	1.0	0.8	0.1	0.5	1.7	0.9
COST OF PREVIOUS COMPARABLE CONSTRUCTION	14.1	9.9	0.0	0.0	11.1	19.4	12.3
ENGINEER/CONSULTANT PRELIMINARY ESTIMATE	58.2	49.3	24.4	83.5	19.6	52.2	46.0
EPA - SUPPLIED COST ESTIMATING PROCEDURES	25.2	36.9	19.9	0.0	68.4	24.3	36.5
COST EFFECTIVE ANALYSIS	1.8	2.9	0.1	0.0	0.4	2.5	1.7
ROUGH ESTIMATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(NONE GIVEN)	0.0	0.0	0.3	0.0	0.0	0.0	0.0
U.S. TOTALS	100.0	100.0	100.0	100.0	100.0	100.0	100.0